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Introduction

This edition of the Education Indicators deals with all levels of education, from kindergarten to university. Some indicators cover the education system as a whole, whereas others focus on a specific level. This year, new information has been added and new topics introduced: graduation from secondary school and university in member countries of the Organisation for Economic Co-operation and Development (OECD).

The purpose of publishing indicators is to ensure accountability by providing specific information on the resources allocated to education, the various activities pursued by the education system and the results obtained. The indicators are presented under a series of headings classifying recent and historical data that help trace these developments over time. The 2001 edition contains 57 sections, that is, two more than the 2000 edition: 49 of these have been updated from last year, while the remaining 8 . ave been substantially revised or are altogether new.

The development of education indicators in Québec is part of a larger movement. The Council of Ministers of Education, Canada (CMEC) has undertaken projects to develop indicators for Canada's provinces; the OECD has done the same for its member countries, and the United Nations Educational, Scientific and Cultural Organization (UNESCO) has also published a series of indicators on education throughout the world. Québec has been an active participant in this worldwide movement, having published the first edition of the Education Indicators in 1986.

Examination of the indicators in this publication reveals a number of trends and developments that characterize Québec's education system. Some are explained briefly below. Additional information on these topics and others can be found further on in this booklet.

Financial Resources Allocated to Education

In 1999-2000, Québec's educational spending, including operating expenses, capital expenses and the administrative expenses of the Ministère de l'Éducation, was estimated at $15.5 billion, or 7.6% of the gross domestic product (GDP). The share of the GDP allocated to education in the rest of Canada was estimated at 6.7% and in the United States, at 7.0%.

Total spending amounted to $2 113 per capita, or approximately 3% less than the average for the rest of Canada. In 1999-2000, the breakdown of total spending by level of education was as follows: elementary and secondary education (school boards and subsidized private schools), 53.2%; college education (CEGEPs and subsidized private colleges), 12.6%; and university education, 20.1%. In addition, other spending, mainly for education funded by Human Resources Development Canada or by Emploi Québec, accounted for 14.1% of the total.

In 1999-2000, operating expenses in Québec were estimated at $6.6 billion for the school boards, for a per-student average of $6 019. This amount was 8% higher than the previous year and the increase is due in large part to the recent settlement of the pay equity issue for teachers. Per-student operating expenses in Québec school boards are comparable to those in the rest of Canada; however, the student-teacher ratio is 14.7 in Québec compared with 16.3 in the rest of Canada, which is offset by a relatively lower salary for teachers in Québec, i.e. $47 526 compared with $55 446 in the rest of Canada.

Per-student operating expenses in CEGEPs were estimated at $7 096 in 1999-2000, 55% ($3 872) of which went to teachers. In 1998-1999, university per-student operating and capital expenses, not including funded research, were $13 653, or less than the average for the rest of Canada ($14 547). Overall university spending, however, represented a higher percentage of the GDP in Québec (1.61%) than in the rest of Canada (1.38%) precisely because of Québec's lower collective wealth (defined by the per capita GDP). An amount of $660.9 million was allocated to university research in 1998-1999. The cost of university professors per student was $4 705 in 1998-1999.

In 1999-2000, 140 178 persons benefited from Québec's Student Financial Assistance Program. A total of $410.4 million was granted in the form of loans and $175.9 million, in bursaries.

Student Retention from Elementary School to University

Student retention in Québec's education system for 1999-2000 is illustrated on the opposite page. The diagram represents the proportions of a cohort of young people who could expect to enroll and to obtain a diploma or degree in each level of education. The diagram shows that, in a generation of 100 persons, 97 could be expected to reach the secondary level and 83 to obtain a first secondary school diploma, 39 to obtain a Diploma of College Studies (DCS), 27 to earn a bachelor's degree, 7 to be awarded a master's degree and 1 to obtain a doctorate. Of the 83 students to obtain a secondary school diploma, 24 would do so in vocational education. However, the educational playing field was far from level for the sexes in 1999-2000; many more male students than female students (23% compared with 10%) left their studies before earning a diploma. On the other hand, 33% of women obtained at least a bachelor's degree, compared with 22% of men.

Objectives regarding the educational success of a greater number of Quebeckers have been set for the year 2010: to have 85% of the students in a generation earn a secondary school diploma before the age of 20, 60%, a DCS and 30%, a bachelor's degree. Women have already attained the objective set for earning a bachelor's degree.

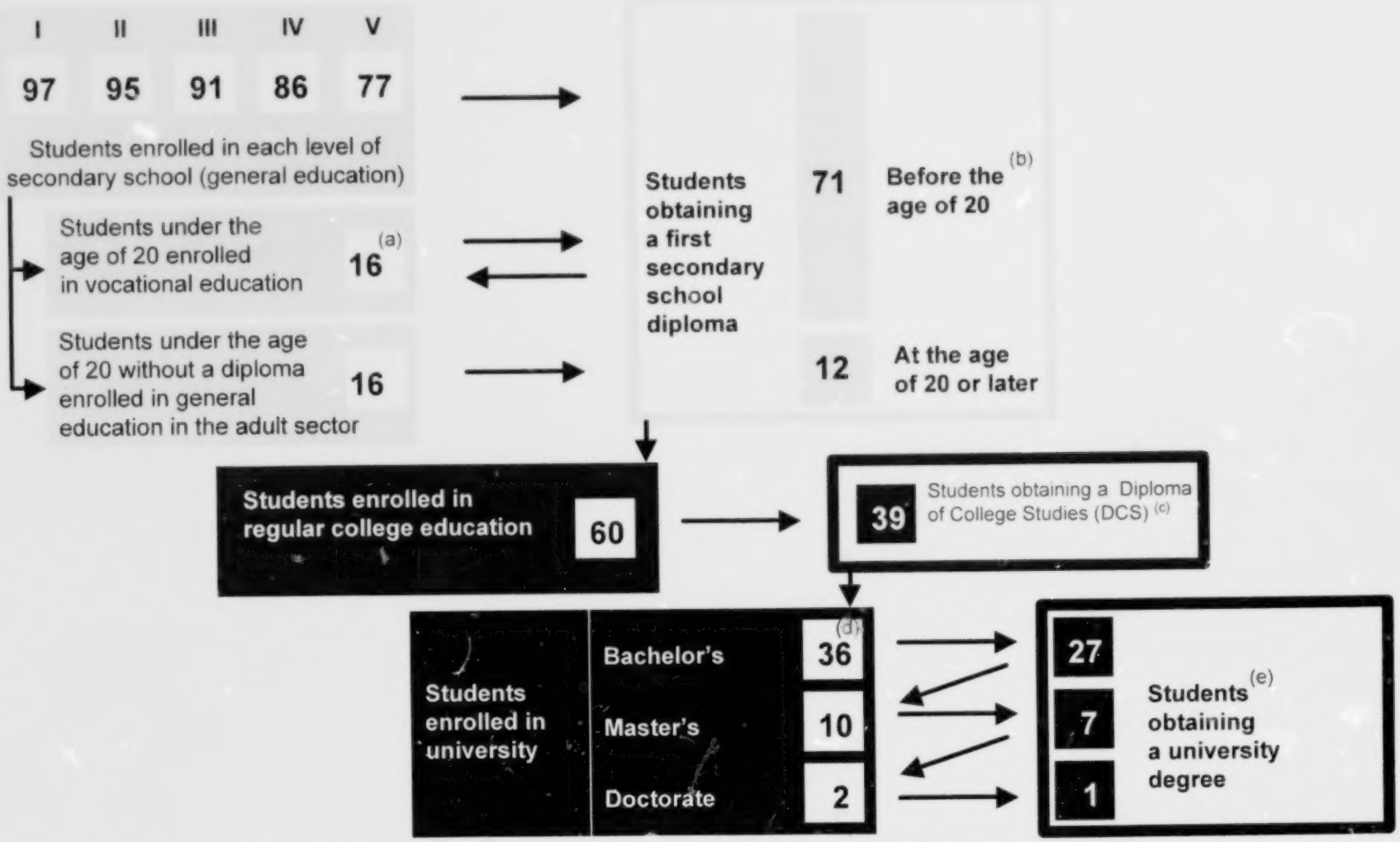
Children who began elementary school in 1998-1999 can expect to be in school for 15.3 years (if it is assumed that the success rates and retention rates prevailing in the education system in 1998-1999 do not change). Secondary school graduates will have been in school for 11.2 years, at an estimated cost of $83 472 in 1999-2000; those obtaining a bachelor's degree will have studied for 17.1 years, at an estimated total cost of $165 008.

Staying in School and Obtaining a Diploma

The dropout issue is a major concern among educators. Numerous approaches have shed light on this phenomenon. Educational success, defined here as the obtaining of a diploma, is measured differently for each level and sector of education. In this regard, the proportion of 19-year-olds who left school without a secondary school diploma was 20% at the beginning of 1999-2000.

The proportion of students in other education sectors who obtained diplomas and the proportion who left school either temporarily or permanently were determined by observing the number of students who leave school each year. Thus,

Student Retention of 100 Quebeckers in the Education System, Based on Findings for 1999-2000



(a) This figure includes 10 general education graduates likely to obtain another diploma in vocational education.
(b) All diplomas earned in the youth sector are included, regardless of the age of the graduates.
(c) The most recent data available dates from 1998-1999.
(d) Students who enroll in university are not limited to those who hold a DCS.
(e) The most recent data available dates from 1999.

of the students in Secondary Cycle Two in the adult sector who quit their studies before the age of 20, 54% did so with a diploma, while 46% left school for at least two years. In secondary vocational education, of 100 students of all ages who were enrolled in programs leading to a Diploma of Vocational Studies (DVS) (known as the Secondary School Vocational Diploma [SSVD] prior to 1998) and who left secondary school, 69 did so with a diploma, while 31 dropped out of school. At the college level (regular education), 55% of students in technical programs leading to a DCS obtained a diploma, while 45% interrupted their studies for at least two full years. Of the college students enrolled in pre-university programs, 70% left with a DCS, while 30% left without one. At the university level, 66% of students leaving bachelor's or master's programs did so with a degree, while 34% dropped their studies. At the doctoral level, 53% of candidates earned a doctorate, while the remaining 47% did not complete their program.

Evaluation of Learning

In the subjects for which uniform examinations were administered for the certification of studies by the Ministère de l'Éducation in June 2000, students in Secondary IV and V obtained an average mark of 75.4% and had a success rate of 88.9%. The male students' average was 74.4% and the female students', 76.3%. Students obtained an average final mark of 73.6% on the examination in Secondary V French, language of instruction; 92.7% obtained a passing mark. At the college level, 88.1% of students passed the ministerial examination of college French.

Secondary II students in Québec obtained better than average results in both subjects in the Third International Mathematics and Science Study–Repeat (TIMSS–R). In mathematics, Québec earned a 57% average compared with 49% for all participants combined. The respective percentages in science were 54% and 49%.

Employers surveyed in 2000 considered that the productivity, resourcefulness and knowledge of basic techniques of vocational education graduates need improvement, despite the fact that almost 90% of them rated the competence of graduates average or high.

What Becomes of Graduates?

When they finish school, graduates from secondary school, college and university have to make choices. Some decide to continue their education, while others set their sights on the labour market. In 1998-1999, at the end of their college studies, 79% of pre-university program graduates under the age of 25 went on to university the following year, compared with 20% of graduates from technical programs.

The unemployment rate in March 2000 was 13.0% for students who had graduated in 1998-1999 with a DVS, 5.5% for students who had graduated from a college technical program and 4.5% for graduates of a pre-university program. In January 1999, the unemployment rate for graduates with a bachelor's degree awarded in 1997 was 6.4% and for those with a master's degree it was 7.4%.

Since 1990, the profile of the work force in Québec has changed significantly. In 2000, of the people with jobs, there were 612 000 more than in 1990 who had a DVS, a DCS or a university degree. During the same period, the number of employed people who had not gone beyond the SSD in general education dropped by 314 000.

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Readers seeking a more in-depth analysis or an up-to-date picture of the situation should consult the individual sections in the pages that follow. The Ministère de l'Éducation and the Conseil supérieur de l'éducation also produce and publish specialized studies on these topics. Finally, general information on the education system is available in the following publications:

- *Basic Statistics on Education*
- Annual report of the Ministère de l'Éducation
- *Annual Report on the State and Needs of Education,* published by the *Conseil supérieur de l'éducation*
- *Strategic Plan of the Ministère de l'Éducation*

This information is also available at the Web site of the Ministère de l'Éducation at <http://www.meq.gouv.qc.ca>.

Québec's Education System: An Overview

Québec's education system offers a wide range of educational programs and services from kindergarten to university.

Elementary and Secondary Education

Elementary school normally lasts six years; secondary school, five. Children are admitted to the first year of elementary school in the school year in which they will have turned 6 years of age by October 1. Kindergarten is not compulsory, but almost all 5-year-olds attend half time and, as of the fall of 1997, full time. School attendance is compulsory until the year in which students turn 16 years of age, which normally corresponds to Secondary IV.

Elementary education is offered in French, English or a Native language, and secondary education, in French or English. Students deemed eligible to study in English are chiefly those whose father or mother attended English elementary school in Canada. Public elementary and secondary education is provided by school boards. The school boards are managed by school commissioners, who are elected by residents in the territory under the school board's jurisdiction. The school boards hire the staff they need to provide educational services. In 1999-2000, the Québec government funded 78% of school board operating expenses, while local taxes accounted for 14% of school board revenues, and other sources provided the remaining 8%.

In July 1998, the number of school boards was reduced to 72, and they were organized along linguistic lines, except for three with special status. There are 60 French school boards and 9 English school boards, with enrollments ranging from 900 to 76 000, for a median size of approximately 10 000 students. The three special-status school boards serve primarily Native students in the Côte-Nord and Nord-du-Québec regions; they are the Cree School Board, the Kativik School Board and the Commission scolaire du Littoral.

Elementary and secondary education is also provided by private institutions, some of which are subsidized by the Ministère de l'Éducation. The private school system accounts for 4.7% of elementary students and 15.9% of secondary students in the youth sector. About half of the operating expenses of subsidized private institutions is funded by the

Québec government. Elementary and secondary education is also offered by some public institutions that are not part of the school board system but that fall under Québec or federal government jurisdiction; these institutions account for 0.3% of students.

Secondary school diplomas are awarded by the Minister of Education to students who fulfill the certification requirements set by the Minister. A Secondary School Diploma (SSD) is required for admission to college. A Diploma of Vocational Studies (DVS) (known as the Secondary School Vocational Diploma–SSVD prior to 1998) generally leads to the labour market, but also allows admission to college. The harmonization of educational services offered in the youth sector and the adult sector is a feature of Québec's education system. Adult education leads to secondary school diplomas that are the same as or equivalent to those offered in the youth sector.

College Education

Students may enroll in college programs leading to a Diploma of College Studies (DCS) or in short technical programs leading to an Attestation d'études collégiales (AEC–attestation of college studies). College education theoretically consists of a two-year program for students enrolled in pre-university education or a three-year program for those in technical education; technical programs aim primarily at entry into the labour market, but also allow admission to certain disciplines in university.

Students may pursue their college studies in the language of instruction of their choice. Public college education is provided by CEGEPs (a French acronym that stands for general and vocational college). CEGEPs are administered by boards composed of representatives from different interest groups, including members of the public, parents, students, staff members and college administrators. In 1999-2000, the Québec government funded 85% of CEGEP operating expenses. Private educational institutions served 12% of college students, and 56% of their expenses were funded by the government. College education is also available at a few institutions associated with ministries other than the Ministère de l'Éducation and by the Macdonald Campus of McGill University.

A DCS is awarded to a student by the Minister of Education following the recommendation of the institution attended. For shorter programs, other types of certification are awarded: the Certificat d'études collégiales (CEC–certificate of college studies), the Diplôme de perfectionnement de l'enseignement collégial (DPEC–diploma of advanced college

studies) and the AEC. These are issued directly by the college. CECs and DPECs are being phased out, as students stopped being admitted to programs leading to these types of certification in 1994.

University Education

Québec has English and French universities; students are free to attend the university of their choice. University education is divided into three levels of studies. The first leads to a bachelor's degree (generally after three years or, less frequently, four years in certain programs), the second to a master's degree and the third to a doctoral degree. Universities also award certificates, diplomas and other forms of attestation to certify the successful completion of short programs. In 1999-2000, 55% of university expenses were subsidized by the Québec government.

The Ministère de l'Éducation

The Ministère de l'Éducation fulfills different functions for the various levels of education. For elementary, secondary and college education, the Ministère develops programs and determines objectives and often content. In terms of labour relations, it negotiates and signs provincial agreements. In terms of financing, it establishes a standard framework and provides the largest share of resources. At the university level, it promotes the advancement of teaching and research by providing universities with the resources required for operation and development while respecting their autonomy and fostering collaboration among the various partners.

Reform of the Education System

In the fall of 1996, following the Estates General on Education, the Ministère de l'Éducation announced the main guidelines for the reform of the education system. Seven major lines of action were defined:

– Provide services for young children, in particular, by implementing full-time kindergarten.

- Teach the essential subjects throughout elementary and secondary school.
- Give more autonomy to schools.
- Support Montréal schools, given the particular challenges they are facing.
- Intensify the reform of vocational and technical education.
- Consolidate and rationalize postsecondary education.
- Provide better access to continuing education.

Concrete changes have already been made: in particular, kindergarten was made full-time for 5-year-olds in the fall of 1997. At the college level, a new financial measure promoting educational success was introduced in 1997-1998: special fees of $2.00 per hour levied for each course not successfully completed (with the exception of the first course) should raise the success rate from 83% to 90% by the end of the 1999-2000 school year. At the secondary level, the diversification of vocational education options has also been undertaken and will provide access to programs leading to a DVS after Secondary III and the implementation of programs leading to an Attestation of Vocational Education (AVE) that will prepare students who have completed Secondary II to practise a semiskilled occupation.

1.1 Educational Spending in Relation to the GDP

In 1999-2000, Québec allocated 7.6% of its gross domestic product (GDP) to education,[1] compared with the Atlantic Provinces at 8.7%, Ontario at 6.3%, and Western Canada at 6.7%. When this indicator is considered, it is evident that Québec educational spending remains higher than the average for the other provinces or the United States.

In 1999-2000, the share of the GDP allocated to education was higher in Québec than in the rest of Canada as a whole, and in the United States. However, compared with the situation that prevailed in the early 1980s, the gap has narrowed.

Between 1981 and 1989, the share of the GDP earmarked for education in Québec dropped considerably (from 9.3% to 7.3%), while it increased slightly in the rest of Canada (from 6.5% to 6.7%), and showed a slightly higher rise in the United States (from 6.3% to 7.0%). The gap of 2.8 percentage points between Québec educational spending and that of the rest of Canada in 1981-1982 was therefore reduced to 0.6 percentage points in 1989-1990; the gap between Québec and the United States decreased to 0.3 percentage points. The fact that Québec has moved closer to the North American average can largely be explained by the more restrictive measures adopted by the Québec government to control spending during that period.

Between 1989 and 1993, a period of economic recession, the share of the GDP allocated to education rose in all regions of Canada and in the United States, with the result that, in 1993-1994, Québec spent 8.7% of its GDP on education, the rest of Canada spent 7.7% and the United States spent 7.2%.

Between 1993 and 1999, the share of the GDP spent on education decreased in all regions of Canada, because of budget cuts. In Québec it went from 8.7% to 7.6%, while in the rest of Canada, it went from 7.7% to 6.7%. In the United States, educational spending has been relatively stable and is estimated at 7.0% for 1999-2000.

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1. In 1999-2000, Québec spent $15.5 billion of its slightly more than $200-billion GDP on education. The concept of total spending used in this document is defined at the bottom of Table 1.1.

If the share of the GDP allocated to education in Québec is compared with that allocated by the member countries of the Organisation for Economic Co-operation and Development (OECD) in 1997, Québec ranks among the countries with the highest educational spending. This is primarily because teaching costs are relatively higher in Québec than the average for OECD countries. The fact that postsecondary education is more developed in Québec than in the OECD countries also helps explain Québec's higher level of educational spending.[2]

To explain why Québec invested a greater share of its GDP in education than the rest of Canada in 1999-2000, the following factors can be considered: per-student spending; collective wealth (defined by the per capita GDP); school attendance rate (the ratio of the total school enrollment to the population between 5 and 24 years old) and the demographic factor (the ratio of the 5-24 age group to the total population). Lower per-student spending in Quebec than the average for the rest of Canada has helped narrow the gap between the share of the GDP allocated to education in Québec and in the rest of Canada. The slightly higher school attendance rate in Québec helps explain why Québec invests a greater share of its GDP in education than the rest of Canada, but it is offset by the demographic factor (older population in Québec). The most important factor underlying the gap between Québec and the rest of Canada is Québec's lower GDP per capita.

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2. The most recent year for which data is available on the share of the GDP allocated to education for the OECD countries is 1997. Refer to the following *Education Statistics Bulletin*, published by the Direction des statistiques et des études quantitatives of the Ministère de l'Éducation du Québec: Demers, Marius. *Educational Spending Relative to the GDP in 1997: A Comparison of Québec and the OECD Countries*, No. 20, November 2000. This document is available on the Internet at <http://www.meq.gouv.qc.ca>.

Table 1.1

Educational spending[1] in relation to the GDP: Québec, other regions of Canada, and the United States (%)

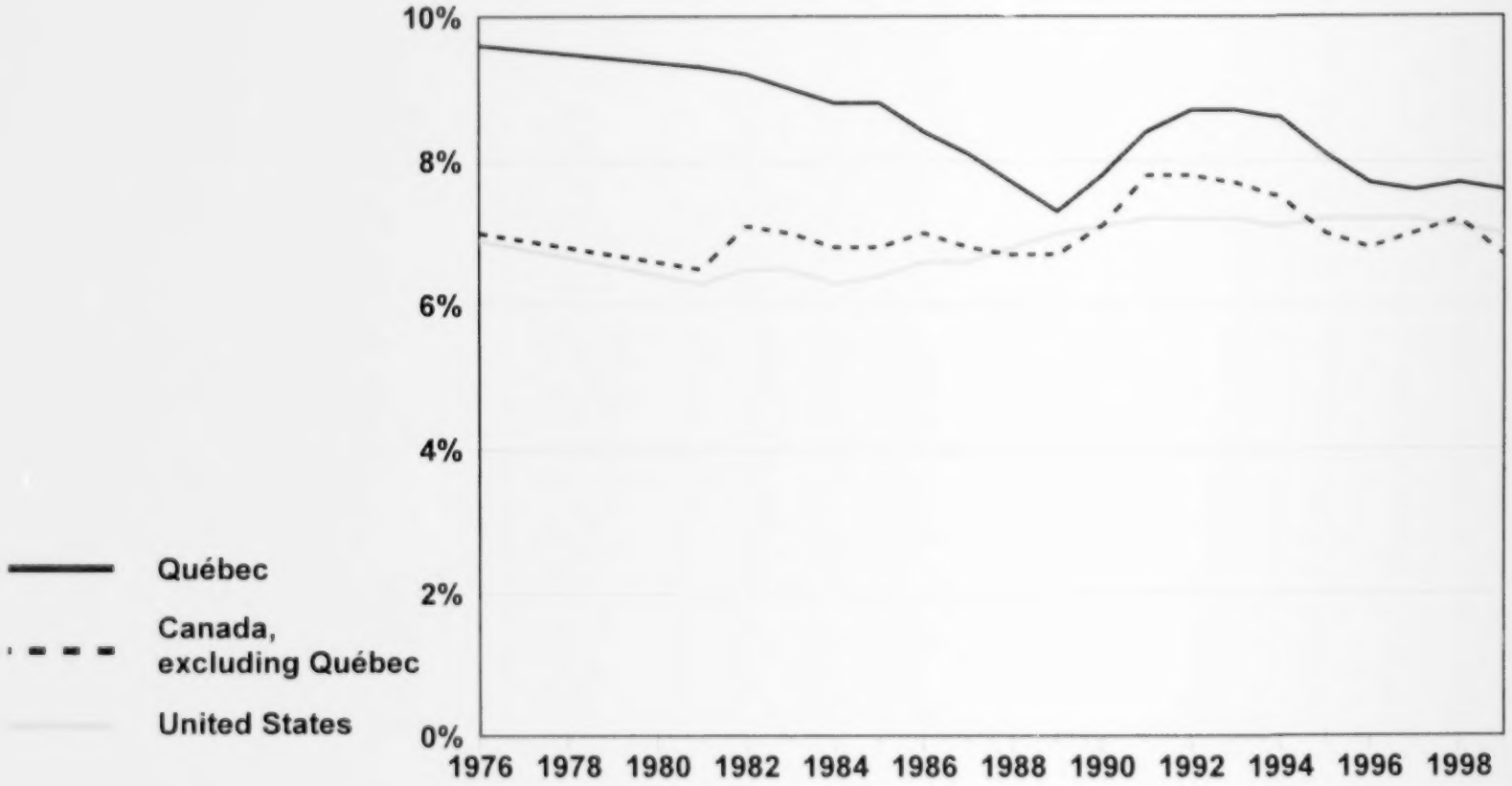
	1976-1977	1981-1982	1989-1990	1993-1994	1998-1999e	1999-2000e
Québec	**9.6**	**9.3**	**7.3**	**8.7**	**7.7**	**7.6**
Canada, excluding Québec	**7.0**	**6.5**	**6.7**	**7.7**	**7.2**	**6.7**
Atlantic Provinces	10.9	10.5	9.3	9.7	9.1	8.7
Ontario	6.8	6.5	6.2	7.5	6.9	6.3
Western Canada	6.3	5.7	6.6	7.2	7.1	6.7
Canada	**7.6**	**7.1**	**6.8**	**7.9**	**7.3**	**6.9**
United States	**6.9**	**6.3**	**7.0**	**7.2**	**7.1**	**7.0**

e: Estimates

1. Total educational spending includes the operating and capital expenses of all levels of public and private education, the Ministère's administrative expenses, government contributions to employee pension plans, the cost of student financial assistance and other education expenses (as defined by Statistics Canada).

Graph 1.1

Total educational spending in relation to the GDP: Québec, Canada excluding Québec, and the United States (%)



1.2 Total Educational Spending Per Capita

In 1999-2000, total educational spending per capita[1] was estimated at $2 113, higher than in the Atlantic Provinces ($2 040), but lower than in Ontario ($2 173) and Western Canada ($2 188). Graph 1.2 shows the relative change in total educational spending per capita for these regions between 1976 and 1999.

In 1999-2000, total educational spending per capita was slightly lower in Québec than the average for the rest of Canada.

Table 1.2a shows the data on total spending per capita by level of education in 1999-2000.[2] These figures indicate the distribution of educational spending among the levels of education for the regions in question. The differences in spending per capita observed between regions for a given level of education are explained in part by the organizational differences between the education systems. Thus, the fact that total per capita spending at the elementary and secondary levels is lower in Québec than in the rest of Canada (with the exception of the Atlantic Provinces) is explained in part by the shorter duration of studies in Québec (11 years in Québec, and generally 12 years in the rest of Canada). Conversely, total spending per capita at the college level is higher in Québec than in the rest of Canada, because of the unique characteristics of our college network (including the mandatory two years of college before entering university).[3]

Table 1.2b shows data on the direct sources of funds for financing total educational spending. These figures indicate that in Québec, provincial subsidies make up a large part of the financing for education (69.8%). This percentage is higher than in the Atlantic Provinces (66.8%), Ontario (56.5%) and Western Canada (52.2%).

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1. Total educational spending includes the operating and capital expenses of all levels of public and private education, the Ministère's administrative expenses, government contributions to employee pension plans, the cost of student financial assistance and other education expenses (as defined by Statistics Canada).
2. The category "Other" in Table 1.2a includes education financed by Human Resources Development Canada, federal spending on language courses, vocational education offered in federal and provincial correctional institutions, various federal and provincial training programs (for example, those offered by Emploi Québec) and expenses of private trade schools, art schools, music schools, etc. (as defined by Statistics Canada).
3. Regarding the organizational differences at the college level, see also Section 1.3.

In the other provinces, financing sources other than the government are higher for one or more of the following reasons: local funding is more significant, tuition fees are higher or the educational organizations of the other regions are in a better position to obtain other sources of funding.[4]

In 2000-2001, tuition fees for university students in Québec were less than half ($1 691) the fees required in the rest of Canada ($3 858).[5] Furthermore, unlike in Québec, students in the other provinces enrolled at a level equivalent to college may be required to pay tuition fees. Thus, according to a survey of technical colleges in Ontario, conducted by telephone in the fall of 1999, the average annual cost of education (tuition fees and other expenses) applicable to Canadian citizens and permanent residents was $2 221. In Québec, the only fees required of students enrolled in college-level technical education are for school supplies, photocopies and registration–generally around $100 to $300 per year.

4. It must be noted, however, that there are comparatively more private schools in Québec than in the rest of Canada, and that the tuition fees paid to the schools are included in the other sources of funding.
5. See Section 1.15.

Table 1.2a

Total educational spending per capita: Québec and other regions of Canada, 1999-2000[e] ($)

	Elementary and secondary	College[1]	University	Other[2]	Total
Québec	**1 124**	**267**	**424**	**298**	**2 113**
Canada, excluding Québec	**1 309**	**136**	**456**	**285**	**2 186**
Atlantic Provinces	1 094	89	517	340	2 040
Ontario	1 329	149	471	224	2 173
Western Canada	1 316	125	415	332	2 188
Canada	**1 264**	**167**	**448**	**288**	**2 167**

Table 1.2b

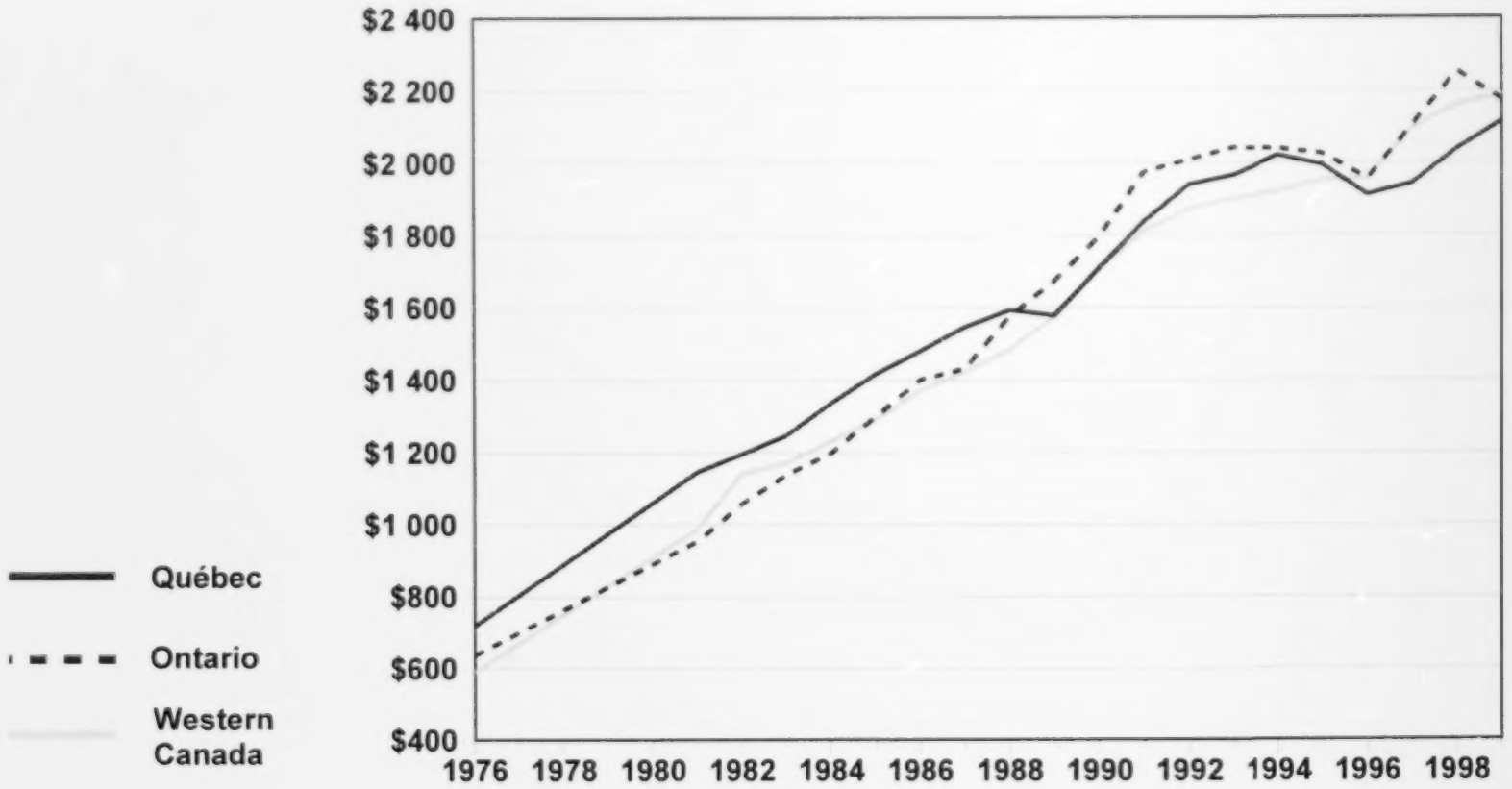
Direct sources of funds for total educational spending: Québec and other regions of Canada, 1999-2000[e] (%)

	Provincial government	Federal government	Local government	Other sources	Total
Québec	**69.8**	**8.3**	**7.2**	**14.7**	**100.0**
Canada, excluding Québec	**55.8**	**9.1**	**16.8**	**18.3**	**100.0**
Atlantic Provinces	66.8	13.9	3.1	16.2	100.0
Ontario	56.5	6.6	18.0	18.9	100.0
Western Canada	52.2	10.1	19.0	18.7	100.0
Canada	**59.1**	**8.9**	**14.5**	**17.5**	**100.0**

e: Estimates
1. Regarding the organizational differences at the college level, see Section 1.3.
2. See Note 2 at the bottom of the text.

Graph 1.2

Total educational spending per capita: Québec, Ontario and Western Canada (in current dollars)



1.3 Total Educational Spending per Student in Relation to Per Capita GDP

When collective wealth is factored in, Québec's collective investment in education remains higher than the average for the rest of Canada.

Total per-student spending is an indicator of financial investment in education, and the per capita gross domestic product (GDP) is an indicator of collective wealth. Relating the two provides an indicator of the relative financial investment in education, that is, per-student spending expressed as a percentage of the per capita GDP. To calculate this indicator, the concept of spending per student is more inclusive than that used in other sections of this chapter.[1]

In 1999-2000, total per-student spending at the elementary and secondary level ($6 842) was higher than in the Atlantic Provinces ($6 536), but lower than in Ontario ($7 663) and Western Canada ($7 403).

Total per-student spending at the college level was higher in Québec ($11 890) than in the Atlantic Provinces ($10 398), but it was lower than in Ontario ($11 999) and Western Canada ($14 988). The comparisons of spending at the college level are provided as a reference only, as this level cannot truly be compared between regions because of significant organizational differences. For example, in Québec, a Diploma of College Studies in pre-university education is the usual requirement for admission to university, whereas in the other provinces, a secondary school diploma is generally sufficient. In Ontario, college-level programs are offered at colleges of applied arts and technology. In some cases, the programs offered can be compared, to a certain extent, with vocational education programs offered by the Québec school boards. More often, they are comparable to the technical education programs offered by Québec CEGEPs. Furthermore, in some provinces in Western Canada (especially Alberta and British Columbia), students can do their first two years of university studies in a college, and then finish their studies at a university.

---

1. Total educational spending includes the operating and capital expenses of all levels of public and private education, the Ministère's administrative expenses, government contributions to employee pension plans, the cost of student financial assistance and other education expenses (as defined by Statistics Canada). However, in the calculation of total per-student spending at the university level, funded research has been excluded.

Total per-student spending at the university level in 1998-1999[2] was higher in Québec ($15 626) than in the Atlantic Provinces ($15 236) or Ontario ($15 497), but lower than in Western Canada ($19 022). The previously mentioned organizational differences partly explain the gaps observed between the regions. For example, the fact that students in Western Canada can do their first two years of university in a college, then finish their studies in a university, explains in part the higher per-student spending in Western Canada.

Table 1.3b shows total per-student spending in relation to the per capita GDP. Factoring in collective wealth, as measured by the per capita GDP, reveals that Québec's collective financial investment in education remains higher than the average for the rest of Canada. The gaps with Ontario are particularly significant, because of the considerable difference in the provinces' collective wealth.

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2. The calculation of university spending per student is based on data provided by Statistics Canada, and the most recent data available at the time this section was written was for 1998-1999. Because of the delays caused by the new *Enhanced Student Information System (ESIS)*, Statistics Canada was unable to provide us with all the data necessary to calculate per-student spending for 1999-2000.

Table 1.3a

Total per-student educational spending: Québec and the other regions of Canada, 1999-2000[e] (1998-1999[e] for university) ($)

	Elementary and secondary	College	University
Québec	**6 842**	**11 890**	**15 626**
Canada, excluding Québec	**7 485**	**13 080**	**16 874**
Atlantic Provinces	6 536	10 398	15 236
Ontario	7 663	11 999	15 497
Western Canada	7 403	14 988	19 022
Canada	**7 337**	**12 595**	**16 563**

Table 1.3b

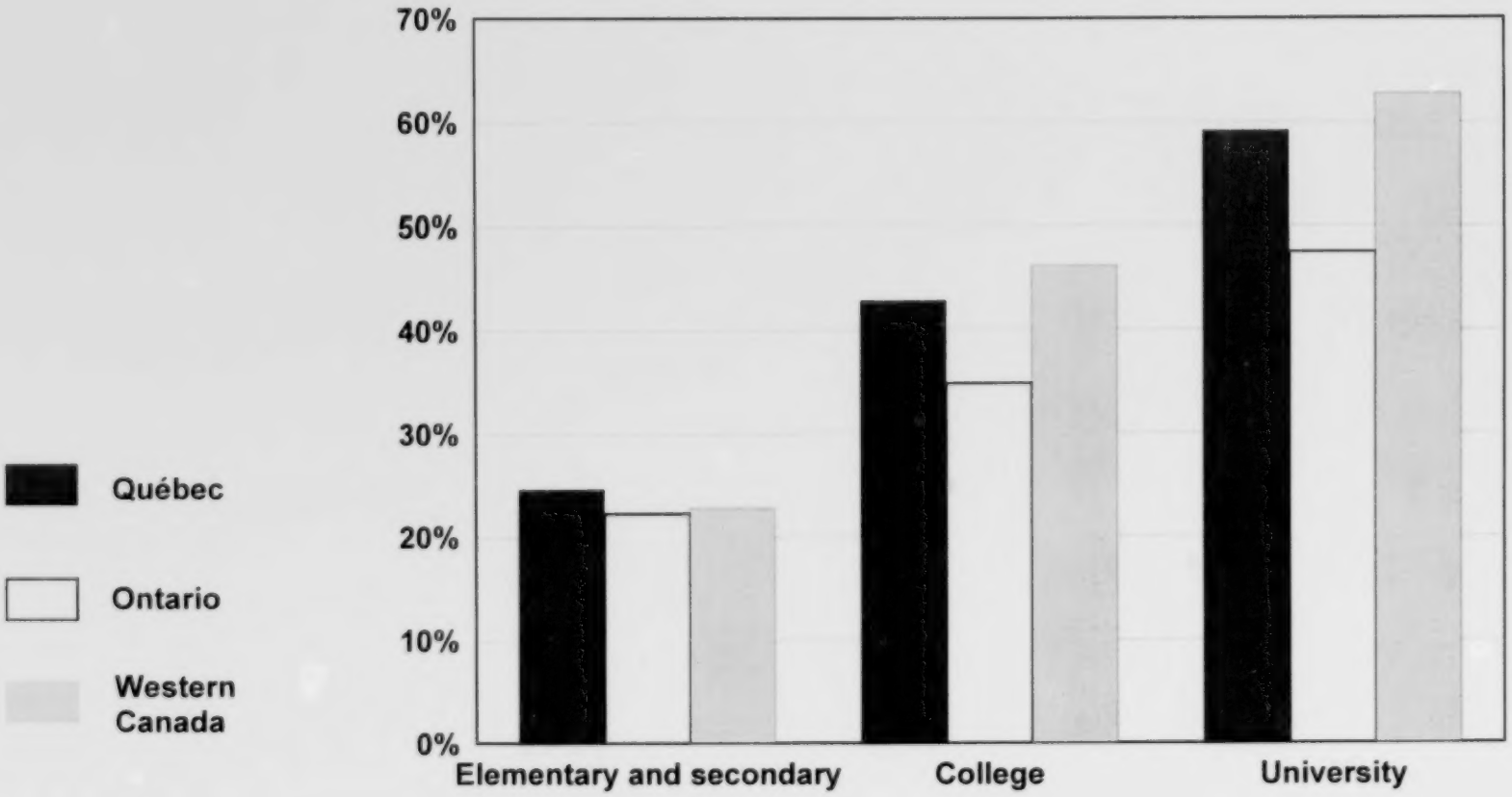
Total per-student educational spending in relation to the per capita GDP: Québec and the other regions of Canada, 1999-2000[e] (1998-1999[e] for university) (%)

	Elementary and secondary	College	University
Québec	**24.6**	**42.8**	**59.2**
Canada, excluding Québec	**23.0**	**40.2**	**55.1**
Atlantic Provinces	27.7	44.1	69.4
Ontario	22.2	34.8	47.4
Western Canada	22.8	46.2	62.8
Canada	**23.4**	**40.1**	**55.9**

e: Estimates

Graph 1.3

Total educational spending per student in relation to per capita GDP: Québec, Ontario and Western Canada, 1999-2000 (1998-1999 for university) (%)



1.4 Cost of Educating Graduates

In 1999-2000, the total cost of a secondary school diploma was estimated at $83 472, of a college-level pre-university or technical diploma, at $107 573 and $135 331, respectively, and of a bachelor's degree, at $165 008.

In 1999-2000, the total cost of a bachelor's degree was approximately $165 000 in Québec.

The concept of expenses used here includes operating expenses (excluding funded research), capital expenses of educational institutions, the Ministère's administrative expenses, government contributions to employee pension plans, the cost of financial assistance to students, and other education expenses. For secondary school graduates, the cost is based on all the years during which school was attended at the preschool, elementary (regular) and secondary (general) levels. For students graduating with a Diploma of College Studies (DCS) in pre-university education, the cost is based on all the years attended at the preschool, elementary (regular), secondary (general) and college (pre-university) levels. For students graduating with a DCS in technical education, the cost is based on all the years attended at the preschool, elementary (regular), secondary (general) and college (technical) levels. For graduates with a bachelor's degree, the cost is based on all the years attended at the preschool, elementary (regular), secondary (general), college (pre-university) and undergraduate levels.

To calculate the cost of educating a graduate, an estimate of the annual spending per student at each level of education in 1999-2000 was used,[1] as well as the average duration of studies completed by those who obtained the diploma or degree.[2] The expenses incurred by students leaving school without a diploma or degree were not taken into account.

1. Here the university level encompasses undergraduate, graduate and doctoral studies. The cost of studies leading to a bachelor's degree is therefore slightly overestimated.
2. At the university level, one year of studies equals two full-time terms. A part-time term is counted as one third of a full-time term at the university level and one quarter at the college level.

According to Section 1.2, government subsidies make up a large part of the funding for education. However, the government also reaps a large portion of the benefits related to the earning of diplomas or degrees.

When we compare the income of two individuals with different levels of education, we usually observe that the person with the higher level of education is the one with the higher income (see Graph 1.4). This extra income benefits not only the person with the higher level of education, but society as well. In fact, through taxation, governments recover a large portion of the extra income earned by the individual with the higher level of education. There are, however, a number of other public benefits in addition to the supplementary tax income produced by an increase in the number of graduates. For example, people with a higher level of education are relatively less expensive for society in terms of the use of certain public services.[3]

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3. Refer to the following *Education Statistics Bulletin*, published by the Direction des statistiques et des études quantitatives of the Ministère de l'Éducation du Québec: Demers, Marius. *The Return on Investment in Education*, No. 8, February 1999. This document examines the profitability of investing in education and is available on the Internet at <http://www.meq.gouv.qc.ca>. In *Education Statistics Bulletin* No. 16, the situation is examined from the point of view of young people acquiring additional training: Demers, Marius. *Education Pays!*, June 2000.

Table 1.4

Cost of educating graduates,[1] 1999-2000[e]

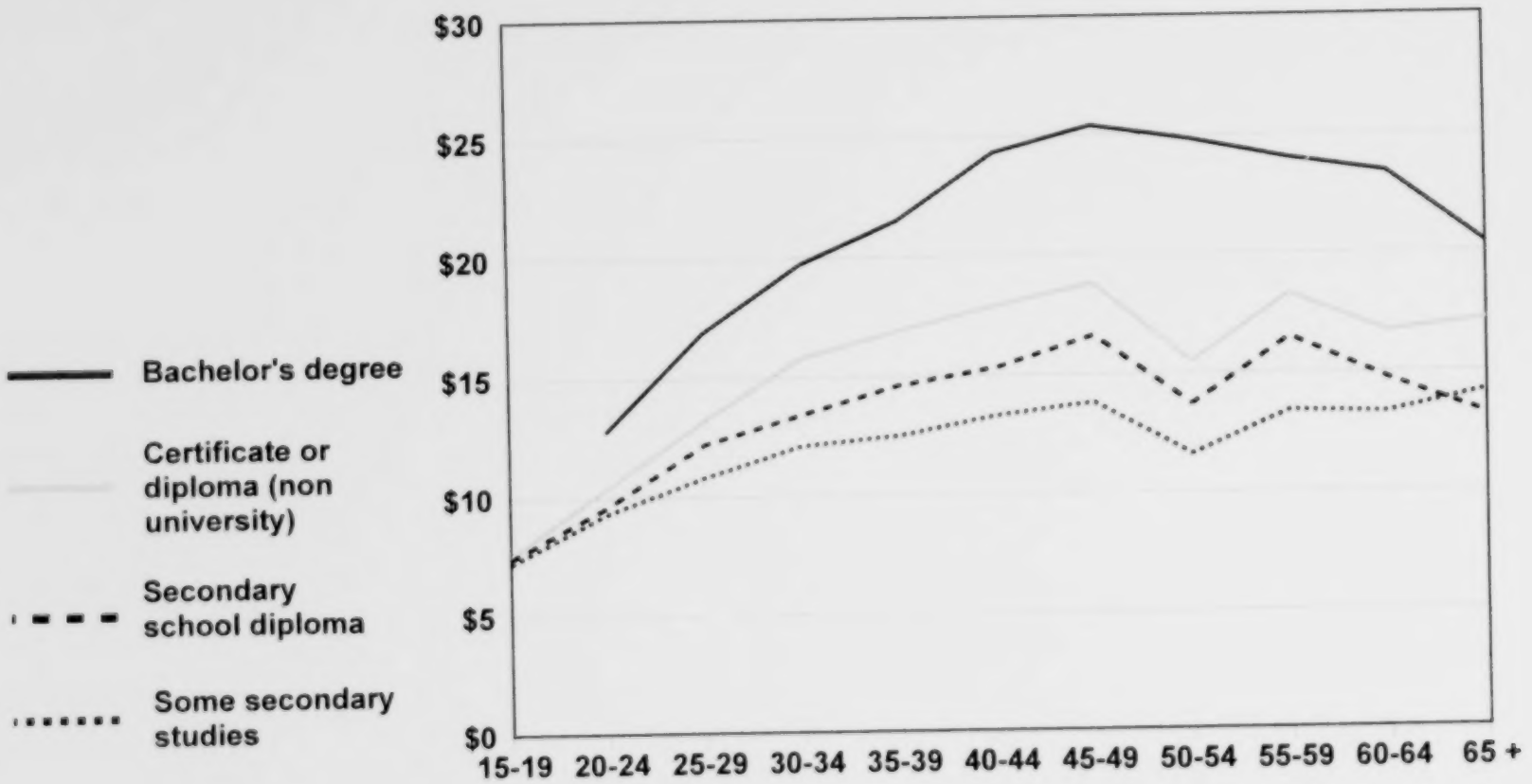
	Average duration of studies (years)	Cost of education ($)
Secondary School Diploma	11.2	83 472
Diploma of College Studies (DCS)		
Pre-university education	13.6	107 573
Technical education	15.0	135 331
Bachelor's degree	17.1	165 008

e: Estimates

1. Preschool education is included in the cost but not in the average duration of studies indicated in the table, since it is not generally recognized as a year of academic pursuit.

Graph 1.4

Average hourly wage, by age group and highest level of schooling achieved, 1999 ($)



1.5 Total Spending on Elementary and Secondary Education in Relation to the GDP

In 1999-2000, Québec spent the same portion of its GDP on elementary and secondary education as the rest of Canada.

In 1999-2000, it was estimated that 4.0% of Québec's gross domestic product (GDP) was spent on elementary and secondary education,[1] compared with the Atlantic Provinces at 4.6%, Ontario at 3.9%, and Western Canada at 4.1%. In the United States, the share of the GDP allocated to elementary and secondary education was estimated at 4.2%. Québec therefore spends roughly the same share of its GDP on elementary and secondary education as the average for the rest of Canada. It should be kept in mind, however, that the duration of elementary and secondary education in Québec is shorter.[2]

Between 1976 and 1981, the share of the GDP allocated to elementary and secondary education dropped from 6.6% to 6.0% in Québec, while in the rest of Canada it went from 4.6% to 4.3%. In the United States, it fell from 4.3% to 3.8%. The gap between Québec and the rest of Canada with respect to educational funding was 1.7 percentage points in 1981-1982, representing a total of $1.4 billion.

Between 1981 and 1989, the share of the GDP allocated to elementary and secondary education dropped from 6.0% to 4.4% in Québec, while it remained stable in the rest of Canada (as a whole) and rose in the United States. The gap of 1.7 percentage points recorded in 1981-1982 between Québec and the rest of Canada narrowed steadily in subsequent years and disappeared almost entirely in 1989-1990. That same year, the share of the GDP spent on elementary and secondary education in Québec was slightly higher than in the United States. The fact that Québec has now reached the North American average can be explained largely by the more restrictive measures adopted by the Québec government to control spending during that period.

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1. In 1999-2000, Québec spent $8.3 billion of its slightly more than $200-billion GDP on private and public elementary and secondary education. The concept of spending used in this document is defined at the bottom of Table 1.5.
2. The duration of elementary and secondary education is 11 years in Québec and at least 12 years in the other regions considered.

Between 1989 and 1993, a period of economic recession, the share of the GDP allocated to education rose almost everywhere in Canada and the United States, such that in 1993-1994, Québec spent 4.9% of its GDP on elementary and secondary education, that is, the same percentage as the rest of Canada, while the United States spent 4.3%.

Between 1993 and 1999, the share of the GDP spent on elementary and secondary education decreased in Québec and the other provinces, following budget cuts to school boards. In the United States, it remained essentially stable.

When the share of Québec's GDP spent on elementary and secondary education is compared with that of the member countries of the Organisation for Economic Co-operation and Development (OECD) in 1997, Québec ranked near the average for OECD countries.[3]

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3. The most recent year for which data is available on the share of the GDP allocated to education in OECD countries is 1997. For more information regarding comparisons with member countries of the OECD, refer to the following *Education Statistics Bulletin*, published by the Direction des statistiques et des études quantitatives of the Ministère de l'Éducation du Québec: Demers, Marius. *Educational Spending Relative to the GDP in 1997: A Comparison of Québec and the OECD Countries*, No. 20, November 2000. This document is available on the Internet at <http://www.meq.gouv.qc.ca>.

Table 1.5

Spending on elementary and secondary education[1] in relation to the GDP: Québec, the other regions of Canada, and the United States (%)

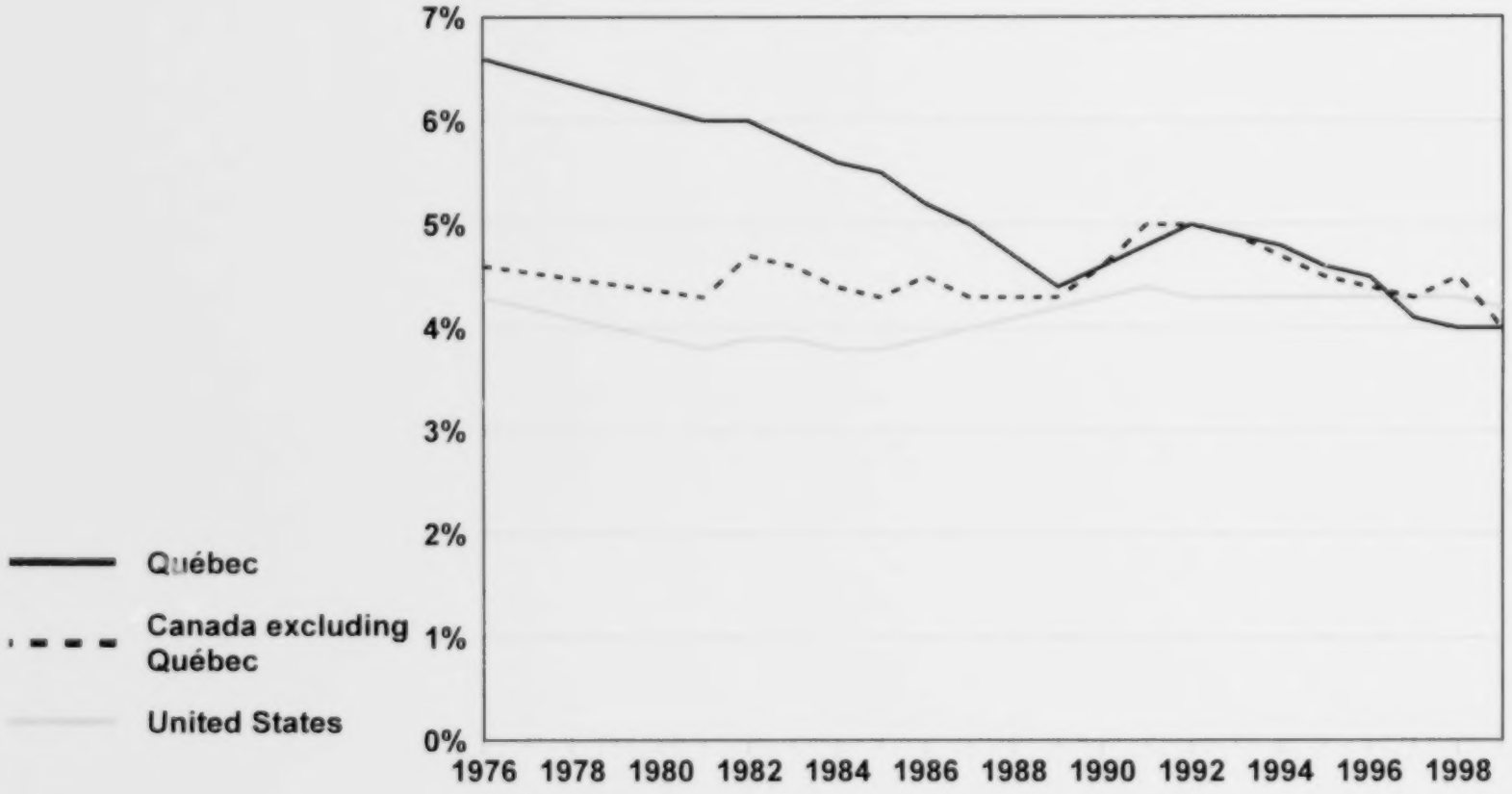
	1976-1977	1981-1982	1989-1990	1993-1994	1998-1999[e]	1999-2000[e]
Québec	**6.6**	**6.0**	**4.4**	**4.9**	**4.0**	**4.0**
Canada, excluding Québec	**4.6**	**4.3**	**4.3**	**4.9**	**4.5**	**4.0**
Atlantic Provinces	7.0	6.9	5.7	5.6	5.0	4.6
Ontario	4.5	4.4	4.3	5.1	4.6	3.9
Western Canada	4.2	3.7	4.1	4.5	4.3	4.1
Canada	**5.1**	**4.7**	**4.3**	**4.9**	**4.4**	**4.0**
United States	**4.3**	**3.8**	**4.2**	**4.3**	**4.3**	**4.2**

e: Estimates

1. These figures include the operating and capital expenses for public and private elementary and secondary education, the Ministère's administrative expenses (the portion attributable to elementary and secondary education), government contributions to employee pension plans and other education expenses (as defined by Statistics Canada).

Graph 1.5

Total spending on elementary and secondary education in relation to the GDP: Québec, Canada excluding Québec, and the United States (%)



1.6 School Board Spending in Current and Constant Dollars

In 1999-2000, school board spending in Québec was estimated at $6.6 billion, student enrollments at approximately 1.1 million, and per-student spending in current dollars at $6 019.[1]

Per-student spending in constant dollars varied in the 1990s, following an overall downward trend, but began increasing again in 1999-2000.

Between 1976 and 1981, school board spending increased an average of 10.6% per year. This rate dropped to 3.9% per year between 1981 and 1989, and to 4.8% between 1989 and 1993, as lower inflation, salary restrictions and generally more conservative budget policies curbed the rapid increase in spending.

Spending can also be expressed in constant dollars,[2] so as to factor in the rise in the price of goods and services used to provide educational services. The figures show that spending in constant dollars remained relatively stable between 1976 and 1981, while enrollments declined by 17%. This resulted in an increase in real funds available per student; per-student spending in constant dollars grew by 22% between 1976 and 1981. The following factors contributed to this rise: a lower student-teacher ratio, an increase in teacher qualifications recognized for salary purposes, and the higher cost of job security for teachers.

In the 1980s and early 1990s, per-student spending in constant dollars increased slightly, then fell again so that, in 1998-1999, it was at approximately the same level as in 1981-1982. The decrease observed between 1993 and 1998 can be explained by budget cutbacks and the application of cost-cutting measures in Québec school boards, as well as by the introduction of full-time kindergarten in 1997-1998, which caused a drop in per-student spending.[3]

---

1. The data presented in this document covers both the youth sector and the adult sector.
2. The school boards' education price index is used to express spending in constant dollars. This index indicates changes in the price of goods and services used to provide educational services. Changes in spending in constant dollars reflect changes in the real funds available to school boards.
3. The introduction of full-time kindergarten resulted in an increase in the "relative weight" of a relatively inexpensive sector of enrollments.

Between 1998-1999 and 1999-2000, there was an 8% increase in per-student spending in current dollars and a 5% increase in constant dollars. The considerable increase in per-student spending in current dollars is primarily the result of the recent settlement of the pay equity issue for teachers and a new collective agreement. The pay equity settlement is retroactive to 1995-1996, but school boards' financial statements do not take it into account until 1999-2000, which explains the significant increase observed that year.[4]

4. It is important to note, however, that the amounts paid retroactively in 1999-2000 for past years are not considered for the purpose of calculating per-student spending in 1999-2000 and that per-student spending for past years has not been adjusted.

Table 1.6

School board spending[1]

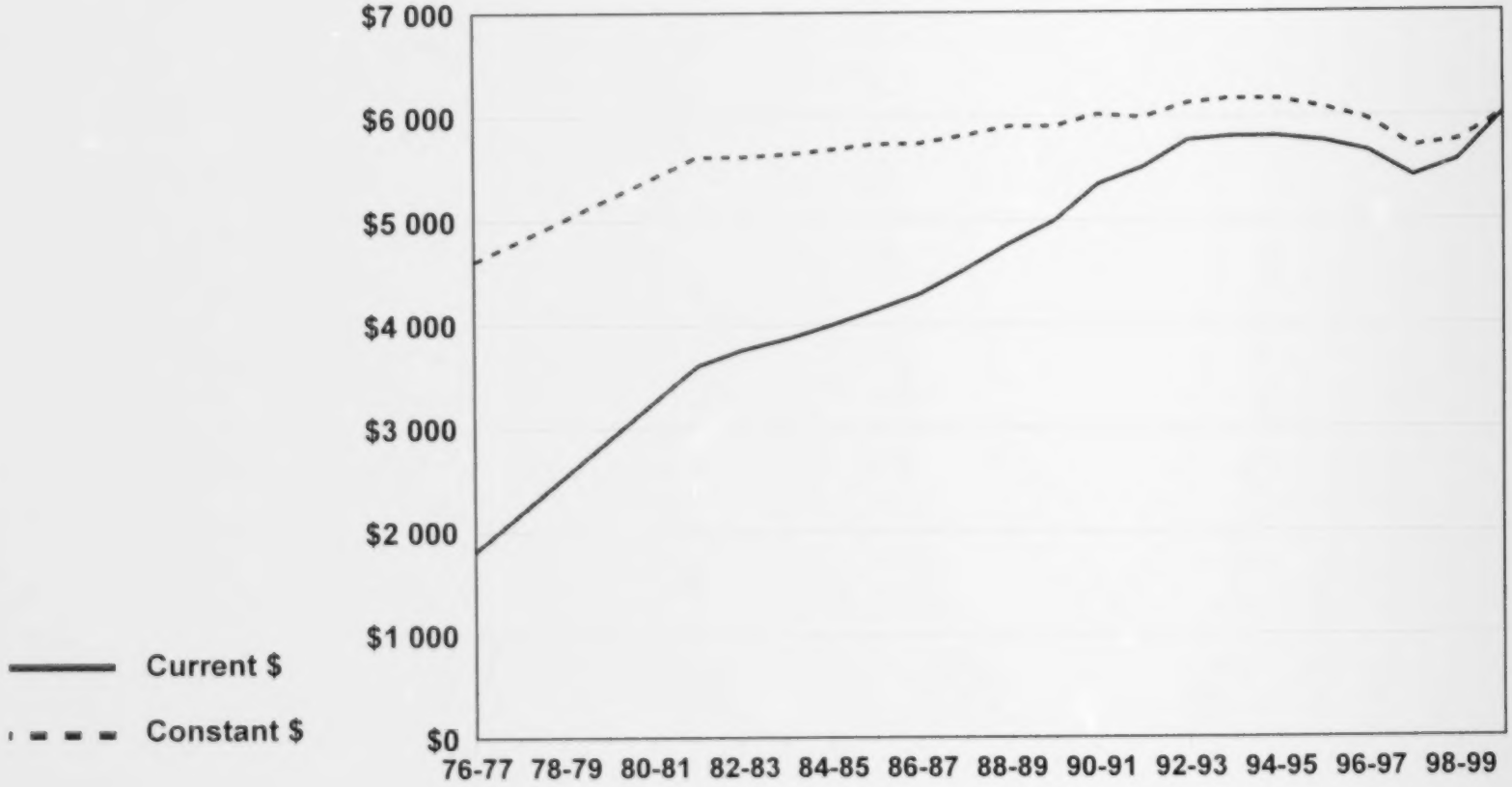
	1976-1977	1981-1982	1989-1990	1993-1994	1998-1999	1999-2000[e]
Total spending (in millions of dollars)						
In current dollars	2 335.3	3 857.0	5 228.2	6 303.9	6 219.2	6 626.8
In constant 1999-2000 dollars[2]	5 955.9	6 012.5	6 181.4	6 696.3	6 428.1	6 628.8
Spending per student ($)						
In current dollars	1 808	3 600	4 991	5 804	5 572	6 019
In constant 1999-2000 dollars[2]	4 610	5 612	5 901	6 165	5 759	6 019

e: Estimates

1. Operating expenses exclude debt service (long-term and current liabilities), capital expenses financed directly from current revenues, and transfer expenses. Revenues from ancillary enterprises have also been deducted from the operating expenses.
2. See Note 2 at the bottom of the text.

Graph 1.6

School board spending in current dollars and in constant 1999-2000 dollars



1.7 School Board Spending per Student

In 1999-2000, spending per student[1] by Québec school boards was estimated at $6 402, compared with the Atlantic Provinces at $5 693, Ontario at $6 569, and Western Canada at $6 424. In the United States, per-student spending was estimated at $8 466.[2]

In 1999-2000, school board spending per student in Québec was relatively near the Canadian average, but lower than in the United States.

Previous editions of the Education Indicators showed that spending per student rose more rapidly in Québec than in the rest of Canada and the United States in the 1970s. The sharper decline in Québec enrollments accounted for a large increase in per-student spending, owing to constraints which prevented expenses from being slashed in proportion to the drop in enrollments. More costly salary policies, a greater decrease in the student-teacher ratio and the higher cost of job-security policies also contributed to the more rapid rise of per-student spending in Québec during this period.

In the 1980s, a reversal occurred: per-student spending rose more slowly in Québec than in the rest of Canada and the United States. In Québec, the slower growth in spending was a result of salary-restriction measures applied to school board employees. During that time, the working conditions of school board employees were improving significantly in Ontario and in the United States, with the result that per-student costs have been higher in these areas than in Québec since the mid-1980s.

---

1. The basic data used in this section comes from an annual survey conducted by the British Columbia Ministry of Education among all Canadian provinces. Some data that is missing from the data bank has been estimated on the basis of Statistics Canada data. The concept of spending differs slightly from that used in previous editions and in Section 1.6 of this edition. For example, the direct contribution of the Québec government to school board employee pension plans is now included here.
2. For the purposes of this comparison, per-student spending in the United States is expressed in Canadian dollars. American dollars are converted to Canadian dollars using the purchasing power parity rates (PPP) produced by the OECD. "Purchasing Power Parities (PPPs) are the rates of currency conversion that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies at the PPP rates, will buy the same basket of goods and services in all countries. Thus PPPs are the rates of currency conversion which eliminate differences in price levels between countries." (OECD, *National Accounts*)

Between 1990 and 1999, per-student spending varied in Canada and, in 1999-2000, per-student spending in Québec was near the Canadian average. There has been a sharp increase in per-student spending in Québec since 1998-1999 (8%). This increase is primarily the result of the recent settlement of the pay equity issue for teachers in school boards. The pay equity settlement is retroactive to 1995-1996, but school boards' financial statements do not take it into account until 1999-2000, which explains the significant increase observed that year.[3]

In the United States, per-student spending was on an upward trend and was 32% higher than in Québec in 1999-2000. A comparison of Québec with the United States as a whole for 1999-2000 reveals that per-student spending was higher in 47 U.S. states,[4] and lower in 4 states. Compared with Ontario, per-student spending was higher in 45 states,[4] and lower in 6 others.

---

3. It is important to note, however, that the amounts paid retroactively in 1999-2000 for past years are not considered for the purpose of calculating per-student spending in 1999-2000 and that per-student spending for past years has not been adjusted.
4. Including the District of Columbia.

Table 1.7

School board spending per student:[1] Québec, the other regions of Canada, and the United States (in current dollars[2])

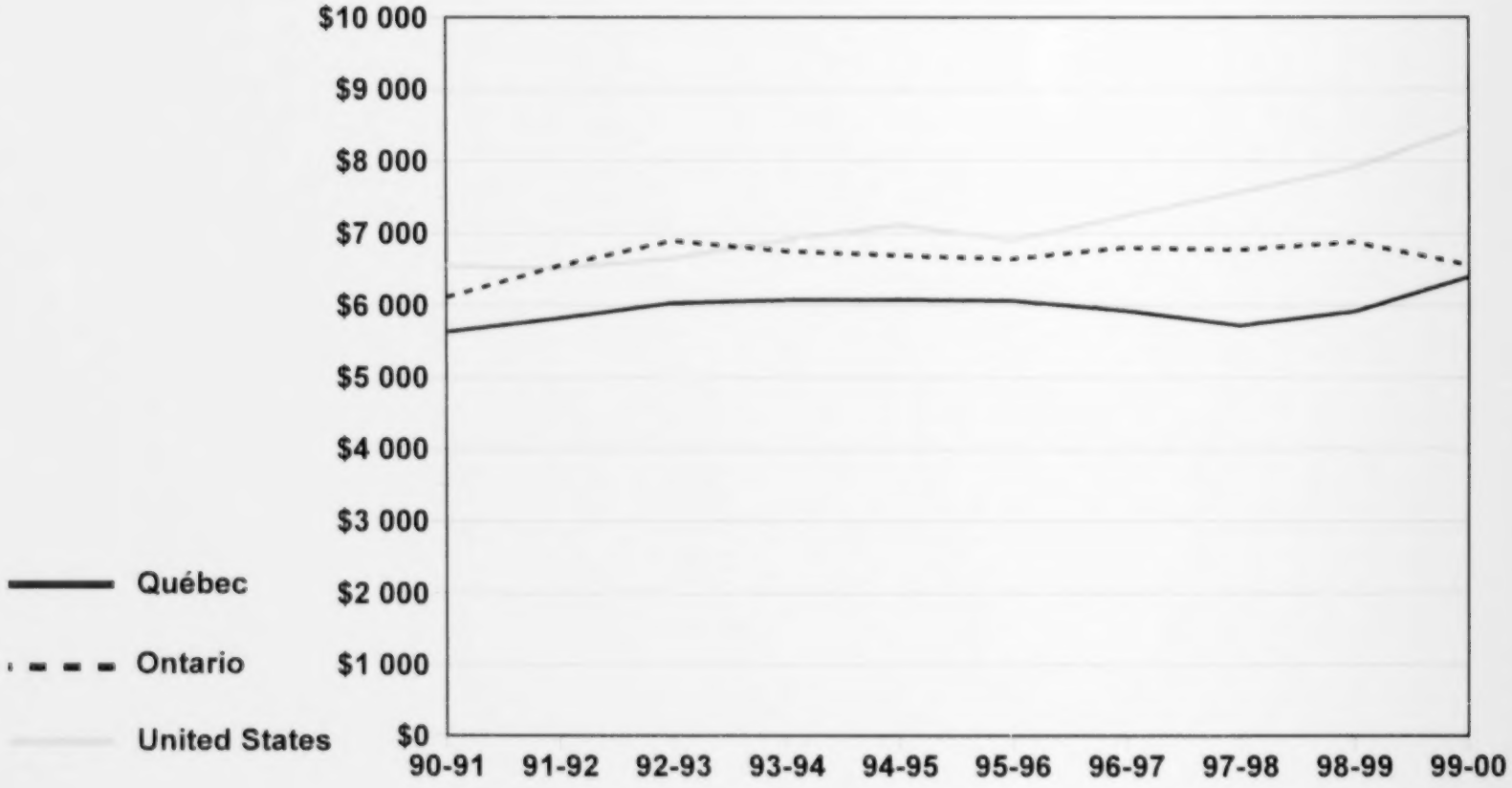
	1990-1991	1992-1993	1994-1995	1996-1997	1998-1999	1999-2000[e]
Québec	**5 634**	**6 037**	**6 083**	**5 929**	**5 919**	**6 402**
Canada, excluding Québec	**5 607**	**6 172**	**6 172**	**6 322**	**6 515**	**6 439**
Atlantic Provinces	4 538	4 789	4 959	5 056	5 334	5 693
Ontario	6 114	6 898	6 696	6 804	6 881	6 569
Western Canada	5 235	5 592	5 782	6 009	6 306	6 424
Canada	**5 613**	**6 142**	**6 152**	**6 236**	**6 383**	**6 431**
United States	**6 551**	**6 656**	**7 114**	**7 246**	**7 913**	**8 466**

e: Estimates

1. Operating expenses exclude debt service (long-term and current liabilities) and capital expenses financed directly from current revenues.
2. See Note 2 at the bottom of the text.

Graph 1.7

School board spending per student: Québec, Ontario and the United States (in current dollars)



1.8 Student-Teacher Ratio in School Boards

In 1999-2000, the average number of students per educator was lower in Québec than in neighbouring regions.

In 1999-2000, the average number of students per teacher in school boards was estimated at 16.1 in Québec and 16.2 in the United States. The student-teacher ratio is calculated by dividing the number of students by the number of teachers in the school boards. Data on enrollments and teaching personnel is expressed in full-time equivalents. The ratio therefore does not indicate the average number of students per class. To understand the difference between these two ratios, the student-teacher ratio must be considered as a composite indicator that is the result of three variables: the number of students per class, the average teaching time of teachers and the average instruction time for students.

In 1999-2000, the student-teacher ratio in Québec school boards was approximately the same as in the United States. A comparison of Québec with the United States as a whole for 1999-2000 reveals that the number of students per teacher was higher in 18 states and lower in 33 states[1] (according to the most recent figures available for each state).

The data available for the other provinces uses a more encompassing concept of personnel. In addition to teachers, educators also include school administrators and nonteaching professionals who work with students (i.e. education consultants, guidance counsellors and pastoral animators).[2] Table 1.8b contains data on the student-educator ratio. In 1999-2000, this ratio was lower in Québec (14.7) than in the Atlantic Provinces (16.0), Ontario (15.9) and Western Canada (17.0). The lower number of students per educator in Québec than in Ontario is largely due to the average teaching time of teachers, which is lower in Québec. For example, in 1997-1998, the average teaching time of teachers in Québec was 615 hours per year at the secondary level, while that of their counterparts in Ontario was 740 hours. Since the average class size was approximately the same in both provinces and the average instruction time for students was 900 hours in Québec and 925 hours in Ontario, the lower average teaching time of teachers in Québec resulted in the need to hire more teachers.

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1. Including the District of Columbia.
2. The basic data used to calculate the student-educator ratio comes from an annual survey conducted by the British Columbia Ministry of Education among all Canadian provinces. Some data that is missing from the data bank has been estimated on the basis of Statistics Canada data.

In the 1990s, the student-educator ratio varied slightly in Québec and the Atlantic Provinces, while it increased significantly in Ontario and Western Canada. The increase in Ontario was due to job cuts resulting from the application of the 1993 Social Contract legislation. One of the objectives of this legislation was to reduce the number of teachers in school boards.

There were also budget cutbacks in Québec in the 1990s, but they affected mostly salaries. It should also be noted that, in their contract negotiations, Québec unions have always given priority to employment levels and job descriptions, while being more flexible with respect to salaries.

Table 1.8a

Student-teacher ratio in school boards: Québec and the United States

	1990-1991	1992-1993	1994-1995	1996-1997	1998-1999	1999-2000[e]
Québec	16.1	15.7	15.8	16.1	16.2	16.1
United States	16.7	16.9	16.8	16.6	16.0	16.2

Table 1.8b

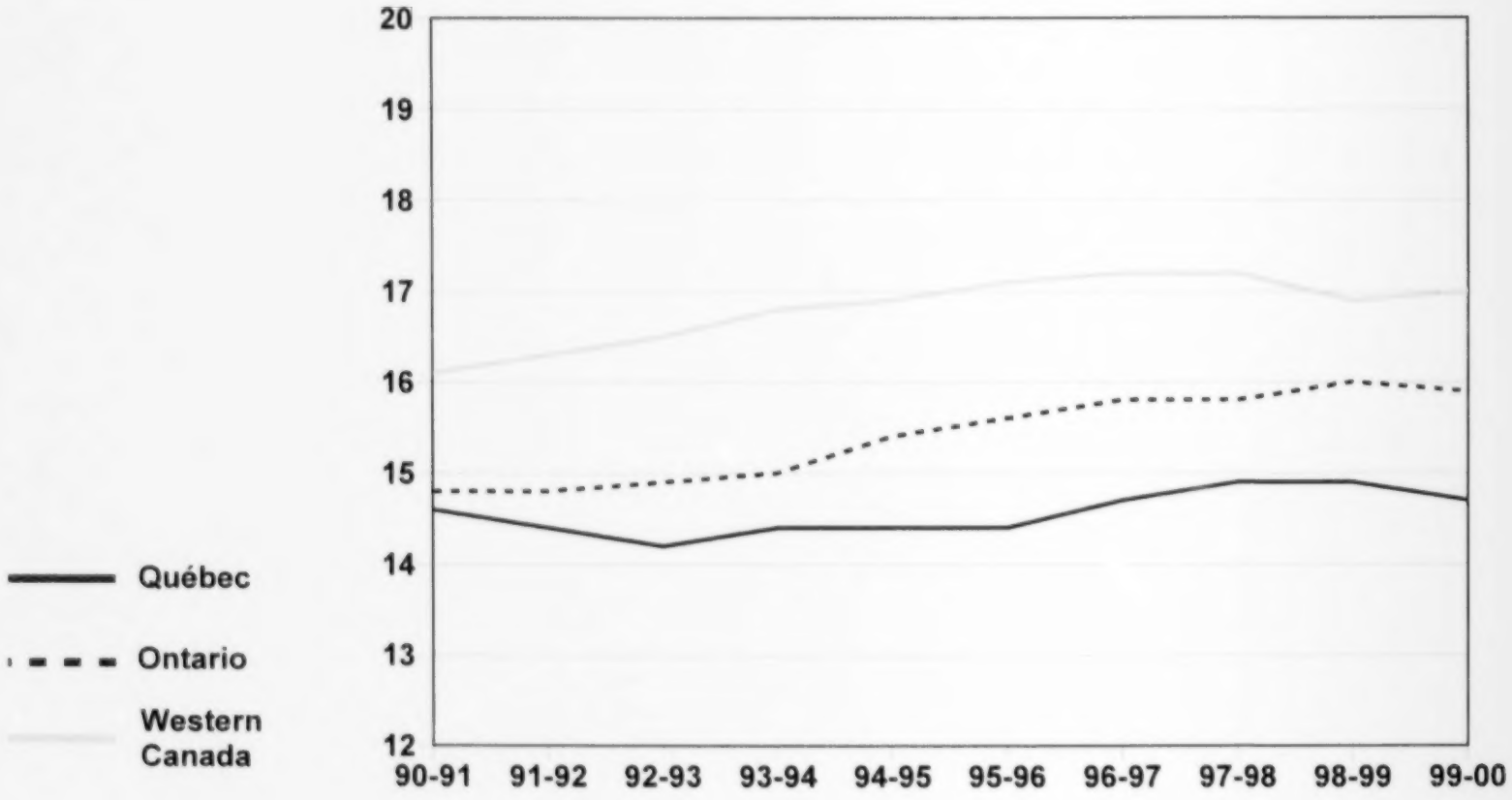
Student-educator ratio in school boards:[1] Québec and the other regions of Canada

	1990-1991	1992-1993	1994-1995	1996-1997	1998-1999	1999-2000[e]
Québec	**14.6**	**14.2**	**14.4**	**14.7**	**14.9**	**14.7**
Canada, excluding Québec	**15.4**	**15.6**	**16.0**	**16.3**	**16.3**	**16.3**
Atlantic Provinces	15.9	16.1	16.4	16.5	16.3	16.0
Ontario	14.8	14.9	15.4	15.8	16.0	15.9
Western Canada	16.1	16.5	16.9	17.2	16.9	17.0
Canada	**15.2**	**15.3**	**15.6**	**15.9**	**16.0**	**16.0**

e: Estimates
1. See definition in the text.

Graph 1.8

Student-educator ratio in school board: Québec, Ontario and Western Canada



1.9 Average Salary of Teachers in School Boards

In 1999-2000, the average salary of teachers in Québec school boards was estimated at $45 392,[1] compared with $49 624 in the United States.[2] A comparison of Québec with the United States as a whole for 1999-2000 reveals 26 U.S. states[3] where the average salary of teachers was higher than in Québec, and 25 states where it was lower.

In 1999-2000, educators in Québec earned less than educators in neighbouring regions.

The data available for the other provinces uses a more encompassing concept of personnel. In addition to teachers, educators also include school administrators and nonteaching professionals who work with students (i.e. education consultants, guidance counsellors and pastoral animators).[4] Table 1.9b contains data on the average salary of educators. In 1999-2000, the average salary of educators in Québec was lower than in the rest of Canada. The difference between the average salary in Québec ($47 526) and in Ontario ($57 055) was particularly significant (17%).

Between 1990 and 1998, the average salary of educators increased by 5% in Quebec, while it rose by 19% in the rest of Canada. In Québec, in a battle against budget deficits, agreements between the government and unions have resulted in the average salary of teachers rising very little. Also, in 1997, a vast program of voluntary retirement resulted in a younger average age of teachers in Québec, and consequently, a decrease in the average salary.

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1. The average salary is calculated for all Québec teachers (regardless of their status).
2. The calculation of the average salary of U.S. teachers is based on data from the National Education Association. This data was then expressed in Canadian dollars using the purchasing power parity rates (PPP) set by the OECD. "Purchasing Power Parities (PPPs) are the rates of currency conversion that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies at the PPP rates, will buy the same basket of goods and services in all countries. Thus PPPs are the rates of currency conversion which eliminate differences in price levels between countries." (OECD, *National Accounts*).
3. Including the District of Columbia.
4. The basic data used to calculate the average salary of educators comes from an annual survey conducted by the British Columbia Ministry of Education among all Canadian provinces. Some data that is missing from the data bank has been estimated on the basis of Statistics Canada data.

However, there was a significant increase in the average salary of teachers in Québec between 1998-1999 and 1999-2000 (6%). This increase was primarily the result of the recent settlement of the pay equity issue for teachers in school boards. The pay equity settlement is retroactive to 1995-1996, but school boards' financial statements do not take it into account until 1999-2000, which explains the significant increase observed that year.[5]

A comparison of the salary of teachers in school boards in Québec with that of the member countries of the Organisation for Economic Co-operation and Development (OECD) is possible using indicators such as the starting salary, salary after 15 years of seniority and maximum salary.[6]

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5. It is important to note, however, that the amounts paid retroactively in 1999-2000 for past years are not considered for the purpose of calculating per-student spending in 1999-2000 and that per-student spending for past years has not been adjusted.
6. Refer to the following *Education Statistics Bulletin*, published by the Direction des statistiques et des études quantitatives of the Ministère de l'Éducation du Québec: Demers, Marius. *Statutory Salaries of Teachers in Public Elementary and Secondary Schools: A Comparison of Québec and OECD Countries*, No. 19, September 2000. This document is available on the Internet at <http://www.meq.gouv.qc.ca>.

Table 1.9a

Average salary of teachers in school boards: Québec and the United States (in current dollars[1])

	1990-1991	1992-1993	1994-1995	1996-1997	1998-1999	1999-2000[e]
Québec	40 478	42 847	43 080	42 997	42 908	45 392
United States	43 009	44 837	45 856	45 858	47 481	49 624

Table 1.9b

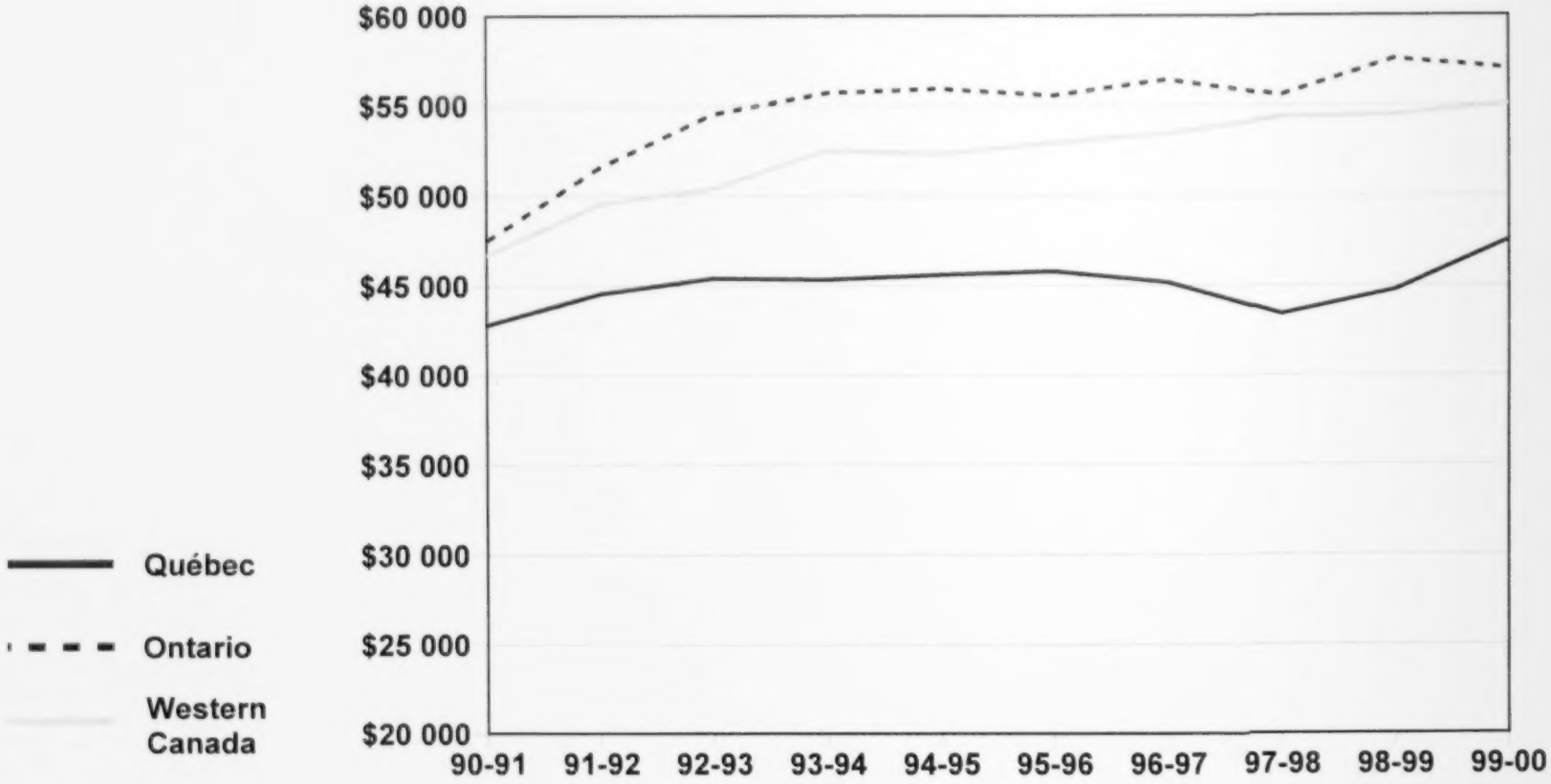
Average salary of educators[2] in school boards, Québec and the other regions of Canada (in current dollars)

	1990-1991	1992-1993	1994-1995	1996-1997	1998-1999	1999-2000[e]
Québec	**42 801**	**45 410**	**45 610**	**45 190**	**44 772**	**47 526**
Canada, excluding Québec	**46 898**	**52 117**	**53 728**	**54 517**	**55 602**	**55 446**
Atlantic Provinces	44 588	45 915	47 104	48 259	49 164	50 477
Ontario	47 470	54 530	55 932	56 444	57 575	57 055
Western Canada	46 691	50 379	52 315	53 448	54 482	55 065
Canada	**45 926**	**50 500**	**51 772**	**52 288**	**53 017**	**53 564**

e: Estimates
1. See note 2 at the bottom of the text.
2. See definition in the text.

Graph 1.9

Average salary of educators in school boards: Québec, Ontario and Western Canada (in current dollars)



1.10 CEGEP Spending

In 1999-2000, CEGEP spending on regular education was almost $1.1 billion, with student enrollments at around 153 000.[1] Per-student spending was an estimated $7 096.

Between 1998-1999 and 1999-2000, CEGEP spending increased by 5%, in spite of a 1.5% decrease in enrollments. This can be explained primarily by the signing of a new collective agreement.

Between 1976 and 1981, CEGEP spending on regular education increased at an average compound rate of 14.8%. This rapid growth can be explained primarily by a high inflation rate, salary increases exceeding the inflation rate, and a considerable rise in enrollments (averaging 3.0% per year). This resulted in a 4.2% increase in per-student spending in constant dollars between 1976 and 1981.[2]

Between 1981 and 1989, the rise in operating expenses of CEGEPs was sharply curbed, with the average annual rate of increase in constant-dollar spending dropping to 4.2%. This decrease was a result of a curtailment of the inflation rate, as well as budget cutbacks adopted by the Québec government. Enrollments also continued to rise until the mid-1980s, but then declined. Per-student spending in constant dollars was slightly lower in 1989-1990 than in 1981-1982.

In 1990-1991, per-student spending in current dollars was $6 920, or 8.6% higher than in 1989-1990 (which corresponds to a real growth of 3.4%). This increase can be explained primarily by a decline in the student-teacher ratio following the addition of new positions as part of a collective agreement. The rise in the number of teachers applies to activities such as departmental committees, practicums, professional development for teachers, and student support services.

In the 1990s, per-student spending in constant dollars followed a downward trend. This can be explained by budget cutbacks and the application of cost-cutting measures in CEGEPs. These measures were largely the result of

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1. Data on enrollments is based on fall registration recognized for the purpose of estimating costs.
2. The CEGEPs' education price index is used to express spending in constant dollars. This index indicates the changes in the price of goods and services used to provide educational services in CEGEPs. Changes in spending in constant dollars reflect changes in the real funds available to CEGEPs.

agreements between the government and unions, which made it possible to lower labour costs. Thus, between 1990 and 1998, per-student spending in constant dollars decreased by 13%.

Between 1998-1999 and 1999-2000, there was a 6% increase in per-student spending in current dollars and a 3% increase in constant dollars. These increases were due primarily to new collective agreements for all CEGEP employees.[3]

3. It is important to note, however, that the amounts paid retroactively in 1999-2000 for past years are not considered for the purpose of calculating per-student spending in 1999-2000 and that per-student spending for past years has not been adjusted.

Table 1.10

CEGEP spending[1]

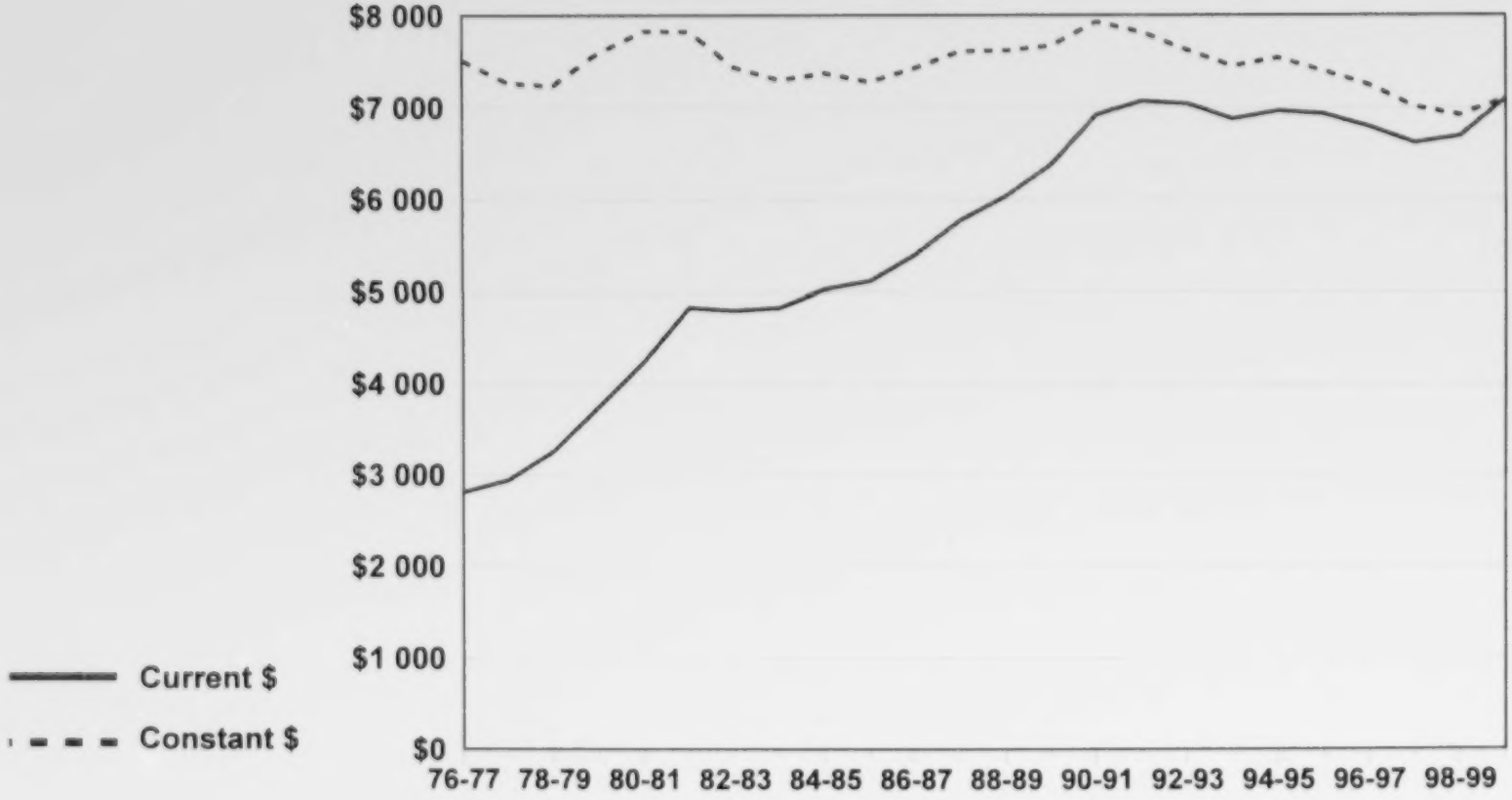
	1976-1977	1981-1982	1989-1990	1993-1994	1998-1999	1999-2000[e]
Total spending in current dollars (in millions of dollars)	298.7	596.0	830.7	1 074.9	1 035.7	1 082.9
Per-student spending in current dollars	2 810	4 831	6 370	6 876	6 688	7 096
Per-student spending in constant 1999-2000 dollars[2]	7 514	7 828	7 671	7 450	6 916	7 096

e: Estimates

1. Operating expenses exclude debt service (long-term and current liabilities) and capital expenses financed directly from current revenues.
2. See Note 2 at the bottom of the text.

Graph 1.10

CEGEP spending per student in current dollars and constant 1999-2000 dollars



1.11 Student-Teacher Ratio, Average Teacher Salary and Cost of Teachers per Student in CEGEPs

This section is a complement to Section 1.10, which analyzed the changes in CEGEP spending. Salary costs for teaching personnel accounted for more than half the total of CEGEP spending in 1999-2000, and the changes in these costs were determining factors in the changes in operating expenses.[1] Two factors determine the cost level of teachers per student:[2] the student-teacher ratio and the average salary of teaching personnel in CEGEPs.

In 1999-2000, the average number of students per teacher in CEGEPs was estimated at 13.4 and the average teacher's salary at $51 714. The actual cost of teachers was slightly lower than in 1990-1991.

In 1999-2000, the average number of students per teacher in CEGEPs was estimated at 13.4 and the average teacher's salary at $51 714. The student-teacher ratio is calculated by dividing the number of students by the number of CEGEP teachers,[3] and therefore does not indicate the average number of students per class. To understand the difference between these two ratios, the student-teacher ratio must be considered as a composite indicator that is the result of three variables: the average number of students per class, the average teaching time of teachers and the average instruction time for students.

Between 1981 and 1989, the average number of students per teacher in CEGEPs rose from 12.3 to 14.3, while the average salary of teaching personnel increased by 36% from $32 595 to $44 217. In comparison, the consumer price index (CPI) increased by 53% during this period. The per-student cost of teachers, in current dollars, went from $2 659 in 1981-1982 to $3 098 in 1989-1990, that is, an increase of 17%, but the cost per student in constant dollars dropped

1. The salary costs considered in this section do not include employee benefits. If these were included, salary costs for teaching personnel would account for more than 60% of total CEGEP operating expenses.
2. The cost of teachers per student is calculated by dividing the wage bill for teaching personnel by the number of students.
3. Data on enrollments is based on fall registration recognized for the purpose of estimating costs, and teaching personnel is expressed in full-time equivalents.

by 11%.[4]

During the 1990s, the student-teacher ratio varied and was 13.4 in 1999-2000. The average salary increased by 11% between 1990 and 1999, and stood at $51 714 in 1999-2000. The cost of teachers per student grew by 12% in current dollars, but dropped by 2% in constant dollars between 1990 and 1999.

The labour cost reduction measures mentioned in Section 1.10 contributed to the drop in the actual cost of teachers per student. Of particular note, once again, is the program of voluntary retirement that resulted in a younger average age of teachers. These measures were taken as part of the battle against budget deficits undertaken by the Québec government in the 1990s.

4. The CEGEPs' education price index is used to express spending in constant dollars. This index indicates the changes in the price of goods and services used to provide educational services in CEGEPs. Changes in spending in constant dollars reflect changes in the real funds available to CEGEPs.

Table 1.11

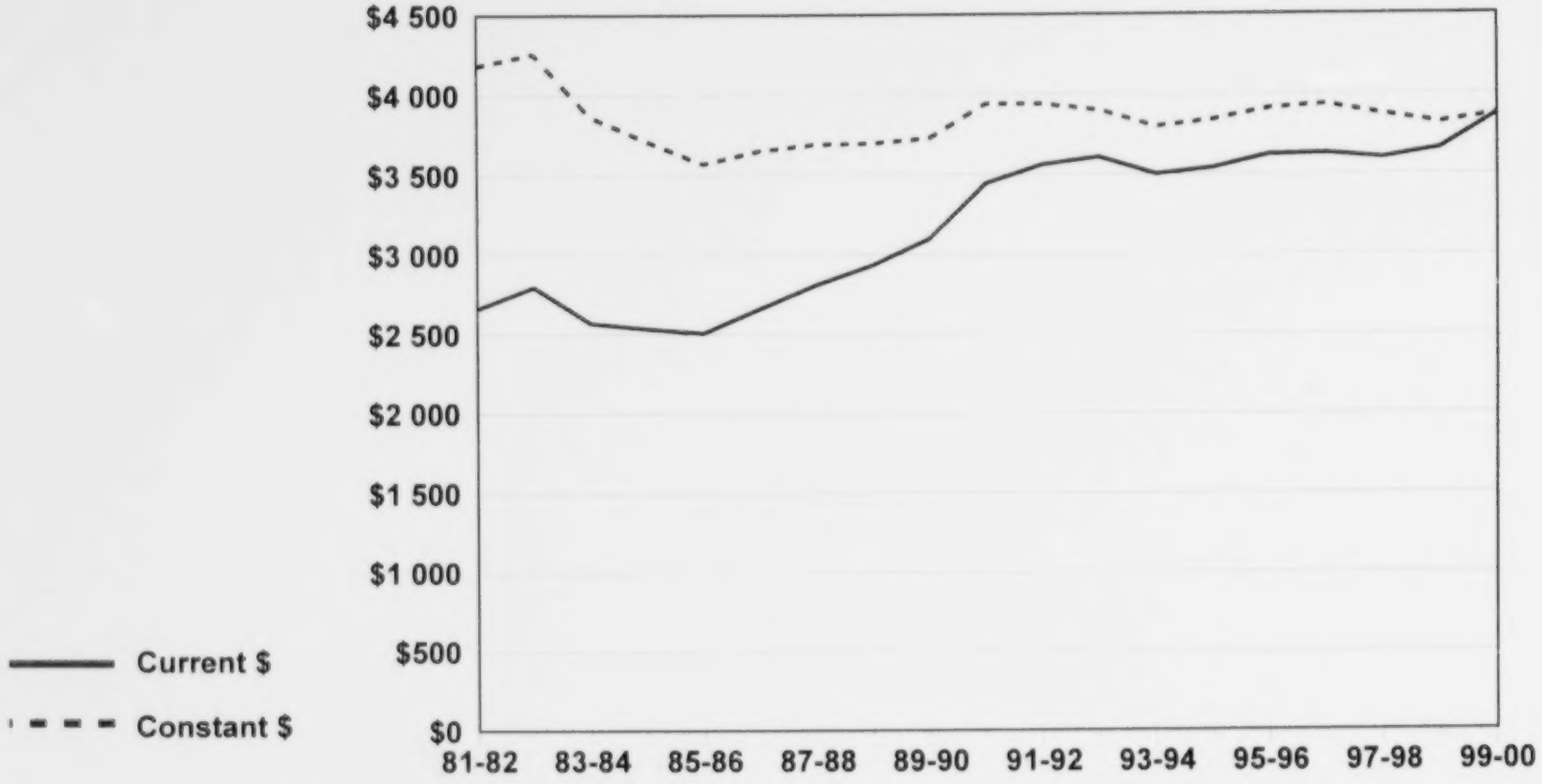
Student-teacher ratio,[1] average salary of teachers and cost of teachers per student in CEGEPs

	1981-1982	1989-1990	1990-1991	1993-1994	1998-1999	1999-2000[e]
Student-teacher ratio	12.3	14.3	13.5	13.9	13.8	13.4
Average salary in current dollars	32 595	44 217	46 512	48 789	50 399	51 714
Cost of teachers per student						
In current dollars	2 659	3 098	3 444	3 503	3 659	3 872
In constant 1999-2000 dollars	4 183	3 729	3 942	3 800	3 823	3 872

e: Estimates
1. See Note 3 at the bottom of the text.

Graph 1.11

Cost of teachers per student in CEGEPs in current dollars and constant 1999-2000 dollars



1.12 Total University Spending in Relation to the GDP

In 1999-2000, Québec allocated 1.53% of its gross domestic product (GDP) to university education,[1] compared with the Atlantic Provinces at 2.19%, Ontario at 1.37%, and Western Canada at 1.28%.[2]

In 1999-2000, the share of the GDP allocated to university education was 1.53% in Québec, compared with 1.40% in the rest of Canada. Higher spending in Québec is explained primarily by a per capita GDP that is lower than in the rest of Canada.

In 1976-1977, the share of the GDP allocated to university education was the same in Québec as in Ontario, but in subsequent years, the financial investment rose in Québec while dropping in Ontario and Western Canada.

Between 1981 and 1989, this share of the GDP was on a slight downward trend in Québec, Ontario and the Atlantic Provinces, while it increased in Western Canada. However, in the early 1990s the share of the GDP allocated to university education increased significantly in Québec, whereas the increase was less marked in the rest of Canada.

The gap between Québec and the rest of Canada therefore widened considerably. Between 1986 and 1993, total spending for university education in Québec increased by 73%, compared with 56% in the rest of Canada. Québec's higher spending is explained primarily by strong growth in research at its universities,[3] but also by a more rapid increase in real funds allocated to education, compared with other regions.

Between 1993 and 1999, the share of the GDP allocated to university education dropped in Québec. It went from 1.98% in 1993-1994 to 1.53% in 1999-2000 as a result of budget cuts and the reduction in labour costs. In the rest of Canada, the share of the GDP allocated to university education went down as well, although not as significantly.

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1. In 1999-2000, Québec spent $3.1 billion of its $204.1-billion GDP on university education.
2. The data on universities presented here has not been adjusted to take into account the organizational differences in education systems.
3. See Section 1.16.

In 1999-2000, investment in university education remained higher in Québec than in the rest of Canada (except the Atlantic Provinces), owing mostly to the fact that the collective wealth, as measured by the per capita GDP, was relatively lower in Québec than in the rest of Canada.

Table 1.12

Total spending allocated to university education[1] in relation to the GDP: Québec and the other regions of Canada (%)

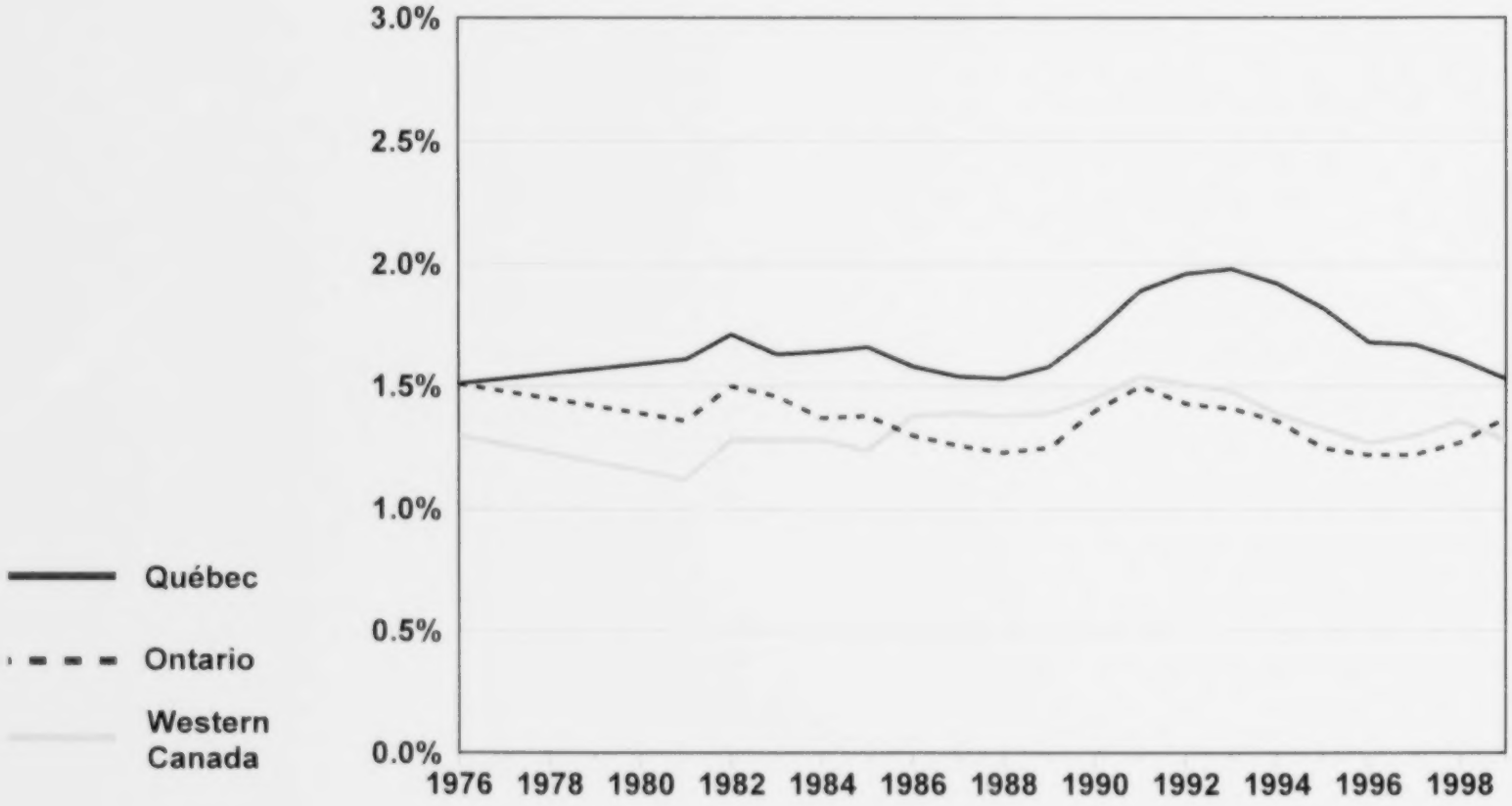
	1976-1977	1981-1982	1989-1990	1993-1994	1998-1999[e]	1999-2000[e]
Québec	**1.51**	**1.61**	**1.58**	**1.98**	**1.61**	**1.53**
Canada, excluding Québec	**1.50**	**1.34**	**1.40**	**1.53**	**1.38**	**1.40**
Atlantic Provinces	2.32	2.36	2.22	2.28	2.22	2.19
Ontario	1.51	1.36	1.25	1.41	1.27	1.37
Western Canada	1.30	1.12	1.39	1.48	1.36	1.28
Canada	**1.50**	**1.40**	**1.44**	**1.63**	**1.43**	**1.43**

e: Estimates

1. These figures include the operating and capital expenses for universities, the cost of student financial assistance, funded and sponsored research at the universities and the Ministère's administrative expenses (the portion attributable to university education). The calculation of the share of the GDP allocated to university education is based on data from Statistics Canada.

Graph 1.12

Total university spending in relation to the GDP: Québec, Ontario and Western Canada (%)



1.13 University Spending per Student[1]

In 1998-1999, spending per student in Québec universities (excluding funded research) was estimated at $13 653, compared with $13 094 in the Atlantic Provinces, $13 480 in Ontario and $16 712 in Western Canada.[2]

In 1998-1999, spending per student by Québec universities was less than the average for the rest of Canada.

In order to ensure a fair comparison of data, the concept of spending used in this section includes the following funds: general, trust, endowment and capital.[3]

In 1981-1982, Québec per-student spending was 27% higher than in Ontario, but as a result of salary restrictions and budget cuts imposed on Québec universities in the subsequent years, the gap was greatly reduced and, in 1986-1987, per-student spending in Québec dropped to 4% lower than in Ontario. In 1986-1987, spending per student by Québec universities was also 12% lower than in the Atlantic Provinces and 22% lower than in Western Canada.

Between 1986 and 1993, spending per student rose by 44% in Québec, compared with 25% in Ontario, 9% in the Atlantic Provinces and 28% in Western Canada. During this period, the consumer price index (CPI) increased by 30% in Québec. The sharp increase in Québec per-student spending was made possible because of growth in government subsidies per student, but also owing to the increased revenues from tuition fees.

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1. The data on universities presented here has not been adjusted to take into account the organizational differences in education systems. See Section 1.3.
2. The calculation of university spending per student is based on data provided by Statistics Canada, and the most recent data available at the time this section was written was for 1998-1999. Because of the delays caused by the new *Enhanced Student Information System (ESIS)*, Statistics Canada was unable to provide us with all the data necessary to calculate per-student spending for 1999-2000.
3. A more encompassing concept of spending was used here, since there are differences in the way in which spending is accounted for between funds, from province to province (especially between the general and the capital funds). Thus, part of the spending accounted for in the capital fund in Québec appears in the general fund in Ontario. For example, Québec universities account for most of their furniture and equipment expenses in the capital fund, while Ontario universities account for a large proportion of these expenses in the general fund.

Between 1993 and 1997, Québec per-student spending rose slightly, then dropped, while in the rest of Canada, the trend was slightly upward. In Québec, the decrease was due to budget cuts and, more specifically, to the reduction in labour costs.

In 1998-1999, per-student spending in Québec universities was slightly higher than in Ontario. If the spending is broken down by item of expenditure, there is higher per-student spending in Québec on capital and financial expenses, but also on teachers[4] and administration. On the other hand, there is less spending in Québec than in Ontario on other categories of personnel and on activities related to computers, libraries and student services.

4. See Section 1.14.

Table 1.13

University operating and capital expenses per student:[1] Québec and the other regions of Canada (in current dollars)

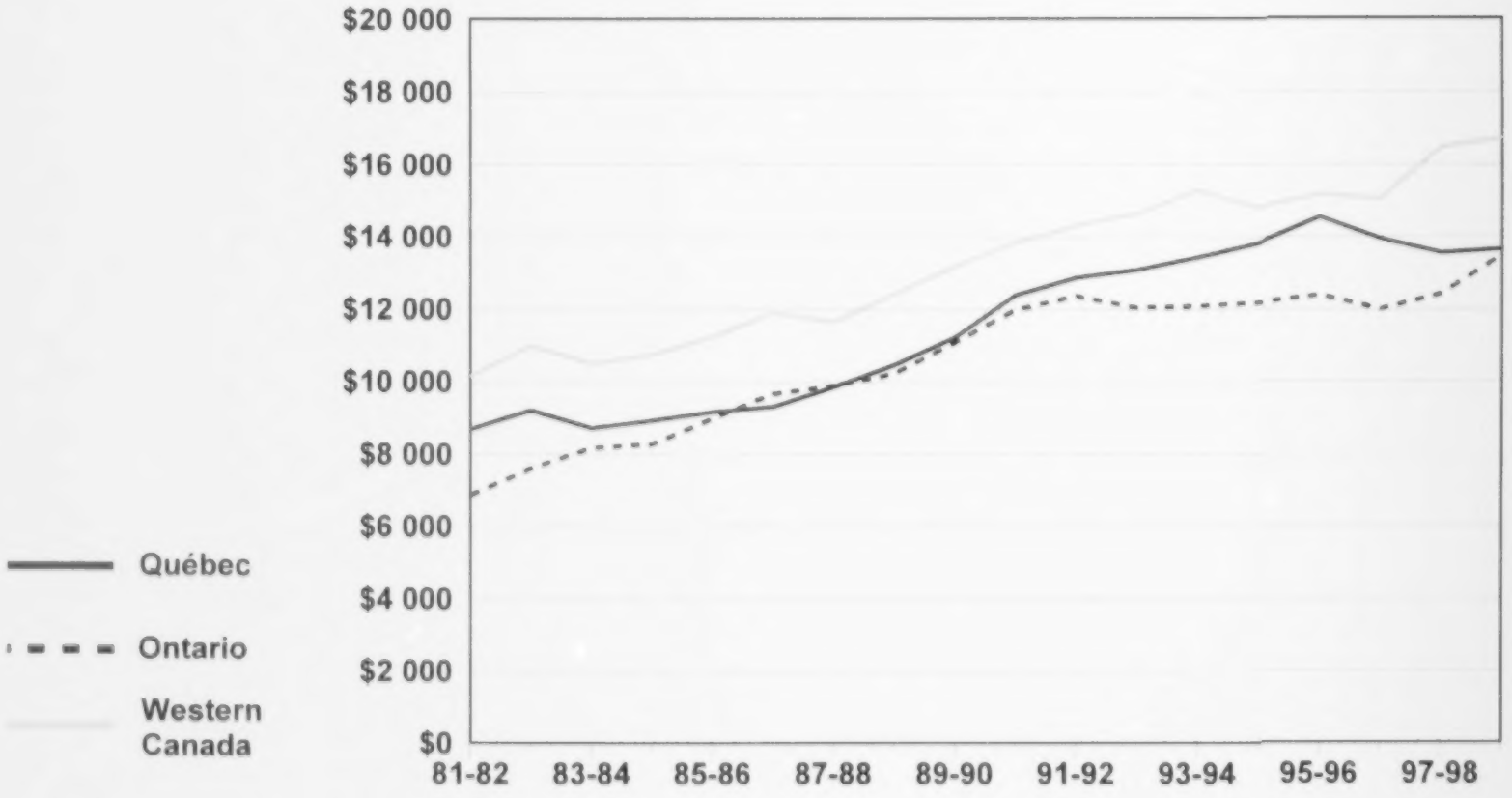
	1981-1982	1986-1987	1989-1990	1993-1994	1997-1998	1998-1999[e]
Québec	**8 683**	**9 307**	**11 212**	**13 425**	**13 545**	**13 653**
Canada, excluding Québec	**8 104**	**10 541**	**11 786**	**13 039**	**13 802**	**14 547**
Atlantic Provinces	8 287	10 539	11 193	11 475	12 315	13 094
Ontario	6 860	9 663	11 080	12 088	12 413	13 480
Western Canada	10 148	11 918	13 188	15 293	16 476	16 712
Canada	**8 252**	**10 209**	**11 636**	**13 139**	**13 738**	**14 324**

e: Estimates

1. The calculation of university spending per student is based on data provided by Statistics Canada. The universities considered by Statistics Canada include two types of institutions: those that are members of the Canadian Association of University Business Officers (CAUBO), and those that are not. In addition, the calculation of per-student spending is based on a standard method for counting student enrollments, as follows: part-time enrollments are divided by 3.5 to convert them to full-time equivalents, and are then added to the full-time enrollments.

Graph 1.13

University operating and capital expenses per student: Québec, Ontario and Western Canada (in current dollars)



1.14 Average Number of Students per Research Professor, Average Salary and Cost of Professors per Student in Universities

In 1998-1999, the average number of students per research professor was lower in Québec than in Ontario and the average professor's salary was 5% lower.

Salary spending for all categories of personnel (including employee benefits) accounts for roughly 80% of university operating expenses in Québec and the rest of Canada. Professors' salaries are the largest component of payroll expenditure. Table 1.14b contains data on the cost of professors per student, which was essentially the same in Québec ($4 705) as in the Atlantic Provinces ($4 783) in 1998-1999. It was 5% higher than in Ontario ($4 479), but 18% lower than in Western Canada ($5 756).

The wage bill considered in the calculation of per-student spending for professors includes salaries for deans, department heads, research professors and lecturers, as well as amounts paid to all other personnel employed in teaching positions (as defined by Statistics Canada).[1] Table 1.14a shows the data on the average number of students per research professor and the average salary of research professors in 1998-1999, according to region.[2]

In 1998-1999, the average number of students per research professor in Québec (20.2) was higher than in the Atlantic Provinces (17.1) and Western Canada (19.0), but lower than in Ontario (20.8). The average salary of research professors was 11% higher in Québec ($74 566) than in the Atlantic Provinces ($67 001), but 5% lower than in Ontario ($78 704) or Western Canada ($78 729).

It should be noted here that the average number of students per research professor is calculated by dividing the number of students by the number of research professors in universities. The ratio therefore does not indicate the average number of students per class. To understand the difference between these two ratios, the student-professor

1. Employee benefits are not included in the wage bill used for this calculation.
2. This refers to full-time research professors. Lecturers and part-time regular personnel are not included. Furthermore, the calculation of the average number of students per research professor was based on a standard method for counting student enrollments, as follows: part-time enrollments are divided by 3.5 to convert them to full-time equivalents, and are then added to the full-time enrollments. Average salary includes basic salary as well as additional fees paid for administrative functions.

ratio must be considered as a composite indicator that is the result of several variables, including the average number of students per class, the average teaching time of research professors and the average instruction time for students. Unfortunately, there is very little data on the variables that determine the average number of students per research professor and, when the information is available, it is not always recent.

Graph 1.14 provides a comparison of the changes in the average salary of university research professors in Québec, Ontario and Western Canada. It reveals that between 1981 and 1998, the average salary increased less rapidly in Québec than in Ontario or Western Canada. During this period, the average salary of Québec research professors experienced an average annual increase of 3.0%, compared with 4.1% in Ontario and 3.5% in Western Canada. The average inflation rate between 1981 and 1998 was 3.7% in Québec and in the rest Canada.

The more restrictive salary policies in Québec in the 1980s and 1990s and, more recently, the agreements between the government and unions on the reduction of labour costs explain the slower growth in the average salary of research professors in Québec than in Ontario and Western Canada.

Table 1.14a

Average number of students per research professor and average salary of university research professors: Québec and the other regions of Canada, 1998-1999

	Québec	Canada, excluding Québec	Atlantic Provinces	Ontario	Western Canada	Canada
Average number of students per research professor	20.2	19.6	17.1	20.8	19.0	19.7
Average salary of research professors ($)	74 566	76 838	67 001	78 704	78 729	76 284

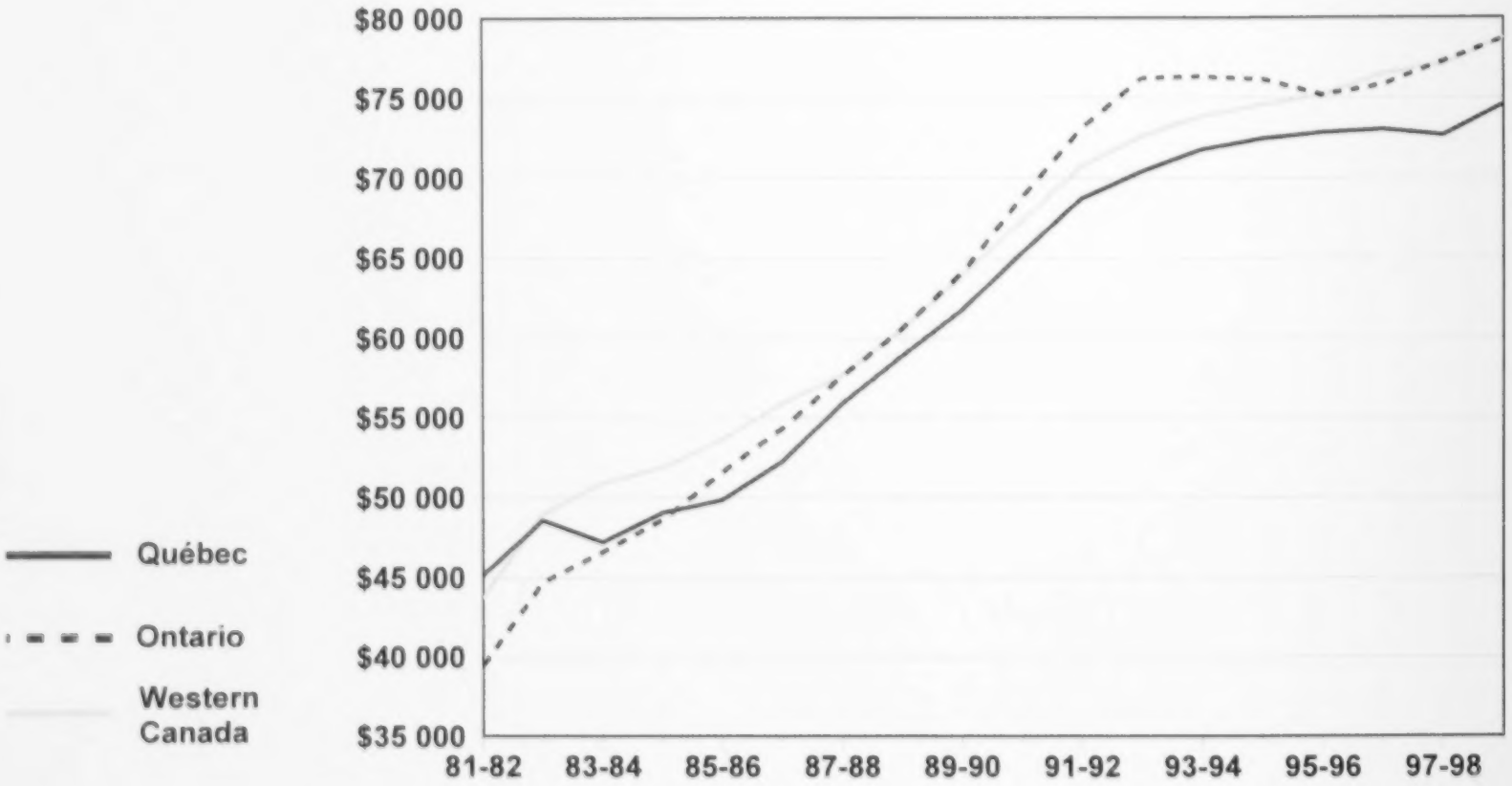
Table 1.14b

Per-student cost of professors in universities: Québec and the other regions of Canada, 1998-1999

	Québec	Canada, excluding Québec	Atlantic Provinces	Ontario	Western Canada	Canada
Cost of professors per student ($)	4 705	4 962	4 783	4 479	5 756	4 899

Graph 1.14

Average salary of research professors in universities: Québec, Ontario and Western Canada (current dollars)



1.15 Student Financial Assistance and Tuition Fees

In 2000-2001, tuition fees for university students in Québec were less than half the amount charged in the rest of Canada.

In Québec, financial assistance is available to students in full-time postsecondary education and in secondary-level vocational programs. The loans and bursaries awarded under Québec's Student Financial Assistance Program are intended to supplement the contribution of the student and, where applicable, of his or her parents, sponsor or spouse: responsibility for the cost of education lies with them first and foremost. Government assistance covers the difference between the allowable expenses and the contribution of the student and, where applicable, of his or her parents, sponsor or spouse.

In 1999-2000, of those persons eligible for financial assistance, 25.0% of students in secondary vocational education, 27.2% of college students and 38.6% of university students received assistance. It should be noted that the financial assistance awarded to students in secondary vocational education falls under a program implemented in 1994-1995. A total of 140 178 students benefited from the Student Financial Assistance Program in 1999-2000. Of these, 85 535 received only a loan, 54 135 received a loan and a bursary, and 508 received only a bursary. Loans totalled $410.4 million and bursaries, $175.9 million.

In 1999-2000, of the university students who received financial assistance, 58.4% obtained only a loan, which averaged $2 931, whereas 41.6% obtained a loan and a bursary totalling an average of $7 467. Those who received a loan and a bursary obtained on average slightly less than half of the assistance in the form of a bursary.

Table 1.15b presents historical data on the breakdown of financial assistance awarded to Québec students attending university. In 1999-2000, loans made up 68.0% of the total assistance awarded and bursaries, 32.0%. In 1984-1985, the corresponding percentages were 53.6% and 46.4%, respectively. This trend toward increasing the portion of assistance that is granted in the form of loans and decreasing the portion given in bursaries has also been observed in the other provinces, in the United States and elsewhere in the world.

In 1999-2000, upon completion of their undergraduate studies, Québec students who had received loans owed an average of $11 987. The average debt for graduate studies was $15 949 and for postgraduate studies, $19 406.

Student loans contracted for college and undergraduate studies averaged $15 255 in 1999-2000; for college through to graduate studies, $23 520; and for college to postgraduate studies, $28 489.

Although these debt levels are relatively high, they are lower in Québec than elsewhere in Canada. This is partly explained by the fact that, on average, Québec awards more bursaries than the other provinces and that tuition fees in Québec universities are the lowest in Canada.

In fact, tuition fees in Québec universities are less than half of what they are elsewhere in Canada, having remained frozen for a number of years. Although there were major increases at the beginning of the 1990s, tuition fees have remained at approximately the same level in Québec since 1993-1994, whereas they have continued to climb in the other regions of Canada. The gap between Québec and the rest of Canada has once again begun to widen, and in 1999-2000, tuition fees in the rest of Canada ($3 858) were 2.3 times higher than in Québec ($1 691).

Table 1.15a

Average tuition fees for full-time undergraduate university students: Québec and the other regions of Canada (in current dollars)

	1989-1990	1990-1991	1991-1992	1993-1994	1999-2000	2000-2001[p]
Québec	**581**	**948**	**1 350**	**1 630**	**1 690[1]**	**1 691[1]**
Canada, excluding Québec	**1 541**	**1 662**	**1 852**	**2 202**	**3 727**	**3 858**
Atlantic Provinces	1 689	1 802	2 023	2 446	3 773	3 969
Ontario	1 561	1 684	1 819	2 076	4 049	4 199
Western Canada	1 440	1 562	1 828	2 298	3 165	3 236

Table 1.15b

Proportion of financial assistance awarded to Québec university students in the form of loans and bursaries (%)

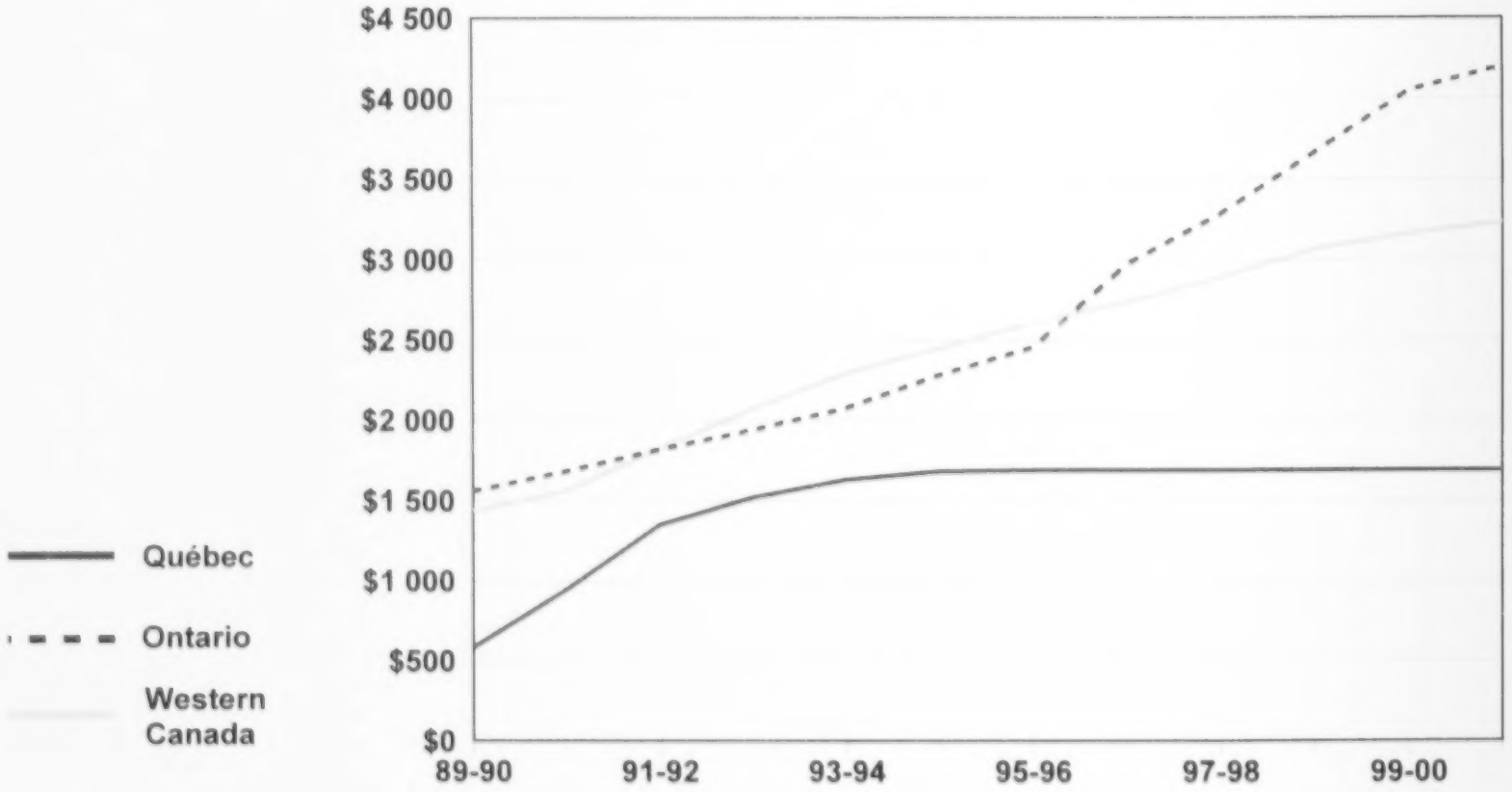
	1984-1985	1989-1990	1991-1992	1993-1994	1998-1999	1999-2000
Loans	53.6	64.5	60.5	63.0	67.7	68.0
Bursaries	46.4	35.5	39.5	37.0	32.3	32.0

p: Preliminary figures

1. In Québec, as of the fall of 1997, Canadian students not residing in Québec must pay an additional amount that has not been taken into account in the calculation of the average tuition fee.

Graph 1.15

Average tuition fees for full-time undergraduate university students: Québec, Ontario and Western Canada (in current dollars)



1.16 Funded and Sponsored Research in Universities

The amount of funding through grants and research contracts allocated to universities has increased significantly, rising from $321.5 million in 1988-1989 to $660.9 million in 1998-1999. This represents an average annual increase of 7.5%. Funding per research professor rose from $40 142 to $83 028, for an average annual increase of 7.5%. In comparison, the consumer price index (CPI) rose at an average rate of 2.4% per year.

In the period between 1986-1987 and 1992-1993, the funding allocated to university research increased sharply, but dropped from 1992-1993 to 1994-1995, and finally stabilized from 1994-1995 to 1997-1998. In 1998-1999, it once again increased sharply.

The amounts allocated to university research increased unevenly in the period in question. From 1988-1989 to 1992-1993, the amounts allocated to university research increased on average 19.5% per year, mainly because of the Québec government's tax incentives for research and development; then, after the disappearance of these incentives, contributions decreased by an average of 5.4% per year between 1992-1993 and 1994-1995. From 1994-1995 to 1997-1998, the amounts received for university research stabilized, increasing annually by a mere 1.0%. Finally, the upward trend resumed in 1998-1999 with an increase of 9.4% over the previous year.

From 1994-1995 to 1997-1998, the contribution of the Canadian government declined by 3.3% per year on average, while the contribution of the Québec government was relatively stable (with an average yearly increase of 0.2%). During this time, contributions from the private sector rose by 7.4% per year on average, and those from other sources, by 3.3% per year. The upward trend was marked in 1998-1999, for all sources of funding, including the Canadian private sector (9.8%), and contributions from other sources, including foreign sources (11.1%).

In 1998-1999, the contribution from the Canadian government constituted 35.0% of grants and research contracts allocated to universities. The share from the Québec government was 23.5%, from the Canadian private sector 27.1%, and from other sources 14.4%. However, the direct contribution of governments does not take into account the cost of tax incentives for encouraging industry to have its research done by university research departments.

In 1998-1999, 80.2% of grants and research contracts were awarded in the fields of health sciences (38.2%), pure sciences (24.6%) and applied sciences (17.4%). Next came social sciences (7.3%), business administration (2.4%) and education (1.5%).

Health sciences received 40.4% of its grants and research contracts from the private sector and 26.2% from the Canadian government. The federal government also funded 50.6% of the research in pure sciences and 42.4% in applied sciences.

Research in education grew an average of 11% per year from 1989-1990 to 1994-1995, going from $9 million to $15.1 million. It dropped to $8.8 million in 1995-1996, then rose to $11.2 million in 1996-1997. Finally, it dropped again in 1997-1998 and 1998-1999 to $9.9 million and $9.7 million, respectively.

In 1980, Québec universities received 21.4% of the funding allocated by the three main federal research councils.[1] In 1998, this figure rose to 27.3%. The latter percentage is higher than the ratio of the Québec population to Canada as a whole (approximately 25%). In 1998-1999, universities received their first grants from the Canada Foundation for Innovation (CFI). They received 25% of grants paid out by the CFI.

1. These are the Medical Research Council of Canada (MRC), the National Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council of Canada (SSHRCC).

Table 1.16

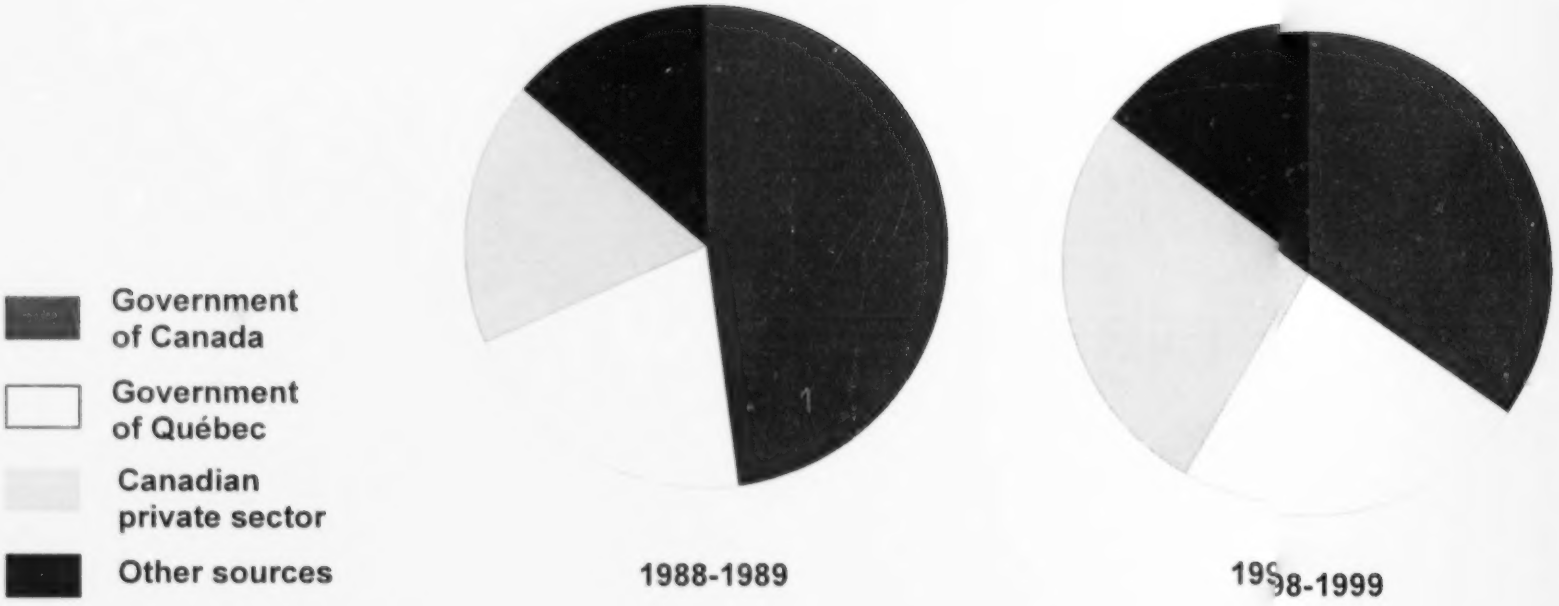
Funded and sponsored research according to source of funding and per research professor

	1988-1989	1992-1993	1993-1994	1996-1997	1997-1998	1998-1999
Grants and research contracts (in millions of dollars),[1] by source						
Government of Canada	154.0	229.0	226.3	225.7	211.6	229.7
Government of Québec	66.3	125.7	132.9	142.0	142.5	155.2
Canadian private sector	57.1	234.4	199.6	157.1	163.8	179.0
Other sources	44.1	65.9	74.1	81.5	87.3	97.0
Total	321.5	655.0	632.9	606.3	605.2	660.9
Number of research professors[2]	**8 009**	**8 618**	**8 784**	**8 601**	**8 052**	**7 960**
Amount per research professor ($)	**40 142**	**76 004**	**72 051**	**70 492**	**75 037**	**83 028**

1. This refers to all research receiving direct assistance (grants, contracts, commissions, etc.) from either the university itself or outside organizations. Included are research projects which are conducted under the supervision of university research professors and for which funds have been put into specific accounts managed by the financial services or accounting department of the university or of a hospital or university-affiliated centre (as defined by the Système d'information sur la recherche universitaire [SIRU]).
2. This refers to career professors who occupy permanent positions in Québec universities, regardless of whether they are currently involved full-time in teaching-related activities or on sabbatical or career development leave. They may also assume certain administrative tasks. For example, department heads, deans and assistant deans often continue to be active in teaching or research. However, our definition of research professor excludes administrators of services (library directors, registrars, etc.) and senior administrators (rectors and vice-rectors) (source: Ministère de l'Éducation and Conference of Rectors and Principals of Quebec Universities, *Enquête sur le personnel enseignant).*

Graph 1.16

Distribution of grants and research contracts, by source of funding



2.1 School Life Expectancy

A child who began elementary school in 1999-2000 can expect to spend 15.3 years in the education system.[1] Since 1988-1989, 0.7 years of schooling have been added for male students, and 0.9 years for female students. School life expectancy has not improved from the 15.7 years observed in 1993-1994. In 1998-1999, the value observed (15.5 years) was the same as the school life expectancy observed in France[2] for the same period.

From elementary to university education, in 1999-2000, school-aged Quebeckers could expect to stay in school for an average of 15.3 years.

A breakdown by level of education reveals that all increases in the last 12 years are attributable to either adult education or postsecondary education. More than half of the additional schooling is a result of college and university studies. At the elementary and secondary levels, schooling rose by 0.32 years, resulting from an increase of 0.50 years in the adult sector and a drop of 0.18 years in the youth sector.

For elementary and secondary school, the actual durations of schooling more or less correspond to the projected length of studies. This is not surprising given that enrollment at these levels of education is virtually universal and compulsory until almost the end of secondary school. The reason that the average duration of schooling is less than the length of programs at the college and university levels is primarily because not all students go on to postsecondary education.

School life expectancy does not necessarily correspond to the number of years of study begun and successfully completed because grades repeated are included in the average duration. The very slight decline since 1992-1993 in the duration of schooling at the elementary and secondary levels can be explained simply by the decrease in the

1. Technically, school life expectancy for a school year is equal to the sum of the schooling rates (or school attendance rates) for full-time studies (or the equivalent) per year of age. A schooling rate is equivalent to the average number of years of schooling per person. The sum of the rates per age indicates the hypothetical duration of studies for a child who begins elementary school and who, throughout his or her progression through school, is in the schooling situation observed for a given year at various ages.
2. Ministère de l'Éducation nationale, Direction de la programmation et du développement, *L'état de l'École*, Paris, Vol. 10, October 2000.

number of years that are repeated (see Section 2.8). At the elementary and secondary levels, male students attend school slightly longer than female students (11.9 and 11.7 years, respectively) precisely because they have more difficulty. At the college and university levels, women tend to stay in school longer because more of them enroll in postsecondary education than men (see Sections 2.9 and 2.11). Women attend postsecondary school for an average of 4 years, compared with 3 years for men.

Table 2.1

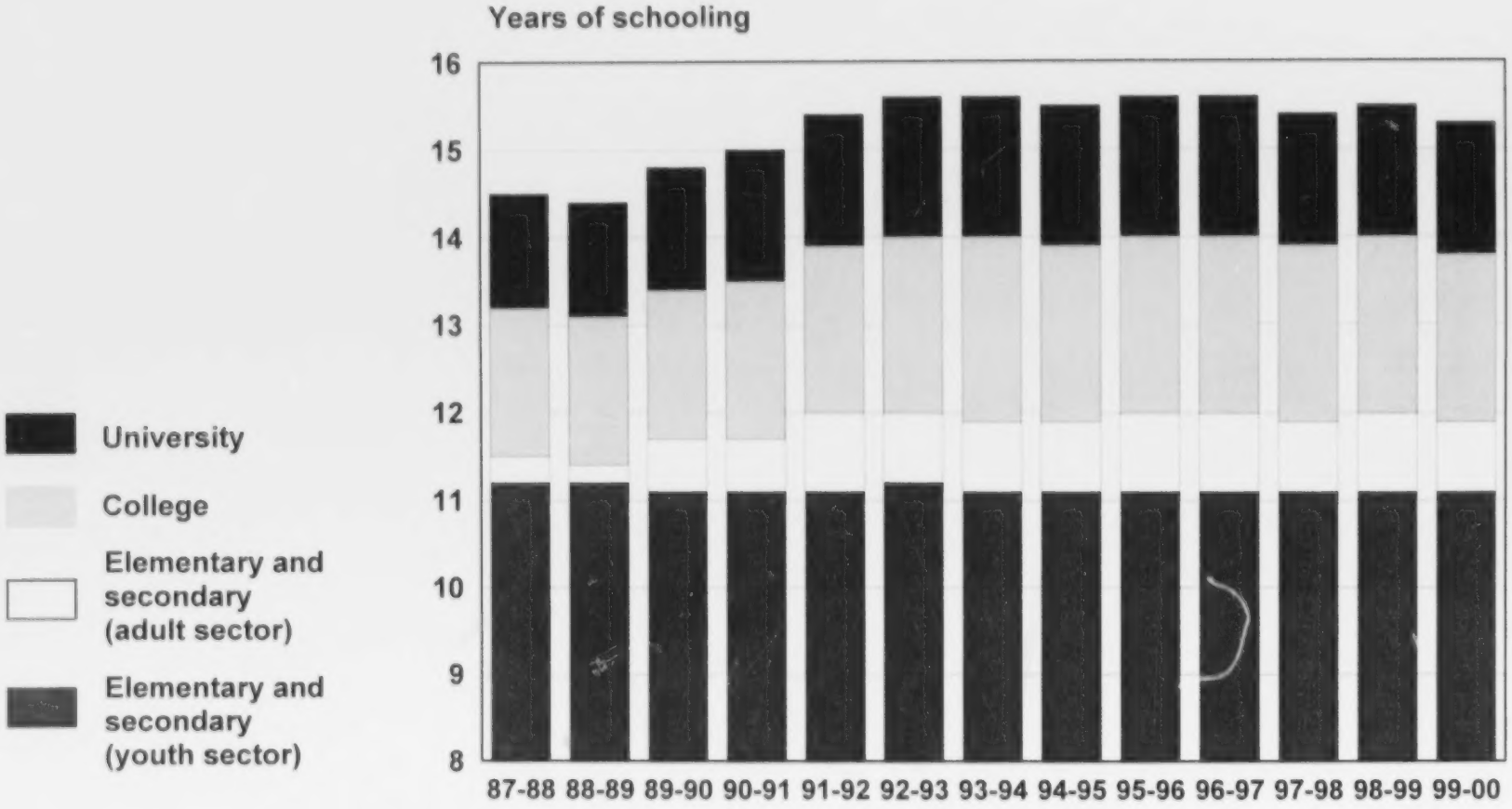
School life expectancy for a child entering elementary school, by gender and level of education (in years)

	1987-1988	1988-1989	1993-1994	1997-1998	1998-1999	1999-2000
All levels of education by gender						
Male	N/A	14.2	15.4	15.1	15.1	14.9
Female	N/A	14.8	16.0	15.8	15.8	15.7
Total	**14.5**	**14.5**	**15.7**	**15.4**	**15.5**	**15.3**
Both according to level of education						
Elementary (youth sector)	6.14	6.16	6.12	6.08	6.07	6.08
Secondary (youth sector)	5.09	5.03	5.01	5.01	5.01	4.97
Elementary and secondary (adult sector)	0.30	0.23	0.84	0.84	0.87	0.80
College	1.74	1.74	2.06	1.99	1.99	1.92
University	1.28	1.34	1.64	1.52	1.52	1.54

N/A: Data not available

Graph 2.1

School life expectancy for a child entering elementary school (in years)



2.2 Enrollment in Preschool Education

Enrollment in kindergarten for 5-year-olds[1] has varied between 97% and 99% for a number of years. There is no difference between the enrollment of boys and girls in either kindergarten for 5-year-olds or kindergarten for 4-year-olds. In the past, enrollment in kindergarten for 4-year-olds varied between 6% and 9%. It has been significantly higher since 1994-1995 because children in *Passe-partout* play groups are now included, and it stood at 16.6% in 2000-2001.

In 2000-2001, 97.7% of all eligible children attended kindergarten for 5-year-olds, almost all of them on a full-time basis.

For a long time, children in part-time kindergarten[2] accounted for approximately 87% of all students in kindergarten for 5-year-olds, and this rate was the same for boys as for girls. In 1997-1998, with the kindergarten reform, the situation was completely reversed as almost all boys and girls in kindergarten for 5-year-olds started to attend on a full-time basis.

Around the world, daycare centres, kindergartens, regular schools and families participate to varying degrees in the education of young children. In Québec, a relatively large portion of educational activities are entrusted to daycare centres, while the official education system becomes involved later in the child's life. Thus, in Québec, 5-year-olds are about as likely to attend school–kindergarten or elementary school–as children in member countries of the Organisation for Economic Co-operation and Development (OECD).[3] In 1998-1999, few countries did not have virtual

1. This refers to the number of children enrolled in kindergarten for 5-year-olds (regardless of their age) in proportion to the population of 5-year-olds, or 4-year-olds in the case of kindergarten for 4-year-year-olds. Very few children who are not 5 years of age on September 30 are enrolled in kindergarten for 5-year-olds, and even fewer children in kindergarten for 4-year-olds are not 4 years of age. Variations in the estimates of the population aged 4 or 5 may affect the calculation of these rates, probably more so than any other factor.
2. In kindergarten for 5-year-olds, part-time attendance means five half-days per week and full-time attendance, five full days per week. In kindergarten for 4-year-olds, part-time attendance means one to four half-days per week and full-time attendance means five half-days per week.
3. The OECD calculates net enrollment rates, that is, the proportion of children of a given age who attend kindergarten or elementary school. These two levels are combined, since there are major differences among countries. The net enrollment rate does not take into account whether the children attend school part-time or full-time, or their hours or days of attendance. Here, too, major differences can be seen among countries.

universal access to school for 5-year-olds (Sweden was one exception). On the other hand, with respect to educational activities for 4-year-olds, Québec is far behind those countries in which the enrollment of 4-year-olds is almost identical to that of 5-year-olds. Similarly, in Québec and the rest of Canada, 3-year-olds do not attend school; this is a rare exception among OECD countries.

Table 2.2

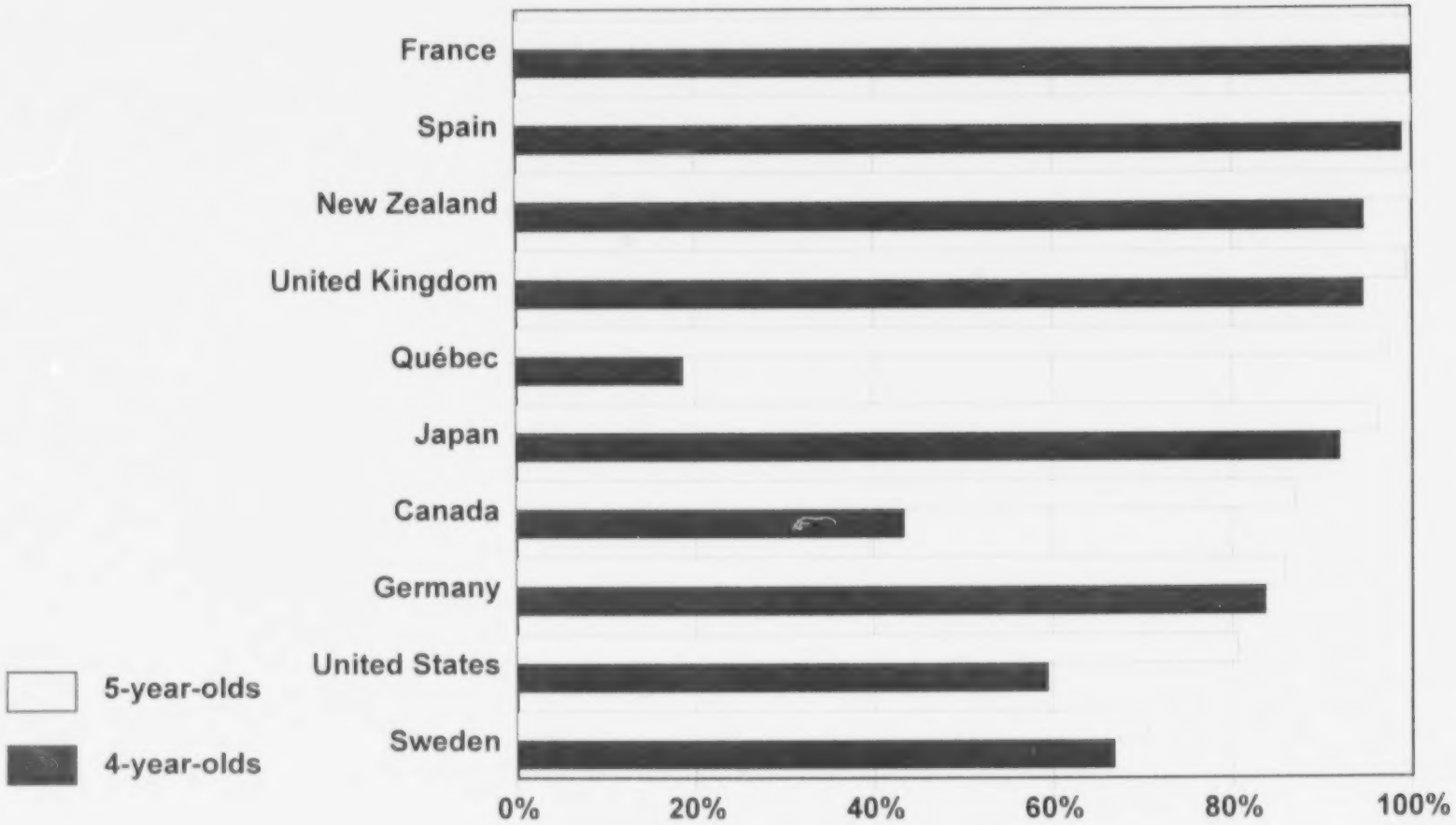
Proportion of children enrolled in kindergarten for 4-year-olds and for 5-year-olds (%)

	1982-1983	1992-1993	1997-1998	1998-1999	1999-2000	2000-2001[e]
Kindergarten for 4-year-olds	**8.0**	**9.2**	**17.4**	**17.6**	**17.1**	**16.6**
Passe-partout play groups	—	—	8.5	8.4	7.6	7.3
Other categories	—	—	9.0	9.1	9.5	9.2
Kindergarten for 5-year-olds	**97.4**	**96.7**	**98.4**	**97.9**	**98.6**	**97.7**
Full-time[1]	—	9.2	97.8	97.3	98.4	97.6
Part-time[2]	—	87.6	0.6	0.6	0.2	0.0

—: Not applicable
e: Estimates
1. Full-time: five full days
2. Part-time: five half-days

Graph 2.2

Net enrollment rates for 4-year-olds and 5-year-olds: Québec, Canada and other countries, 1998-1999 (%)



2.3 Enrollment in Secondary IV and V, General Education–Youth Sector

Enrollment in Secondary V stood at 76.8% in 1999-2000, and has been climbing steadily since 1996-1997. With a rate of 86.2%, enrollment in Secondary IV was virtually identical to the all-time high of 86.3% recorded in 1994-1995. But in both cases, the 1999-2000 enrollment rate is the second-highest ever observed.

In 1999-2000, in general education in the youth sector, enrollment in Secondary V was 76.8%. With the exception of 1995-1996 (78.5%), this is the highest rate ever observed.

From a more historical perspective, Graph 2.3 shows that enrollment in Secondary IV and V increased appreciably in the 1980s. This trend can be explained by the fact that admission to vocational education was delayed to ensure that students spent an extra year in general education. On the other hand, the drop observed in 1985-1986 (in Secondary IV) and in 1986-1987 (in Secondary V) was due to the raising of the pass mark.[1] There was a temporary decline in student retention, but it was not long before an upward trend took hold once again.

Enrollment in Secondary I is virtually universal,[2] that is, 97% in 1999-2000; however, the numbers have been declining slightly in recent years. In 1999-2000, 95% of young people were enrolled in Secondary II, and 91% in Secondary III. The rate of enrollment in Secondary III was lower than in 1998-1999 (a record year at 93%).

Differences in enrollment between female and male students appear in Secondary II, where female students are ahead of the male students by 2 percentage points; by Secondary III, they are ahead by 3 percentage points. The gap widens in Secondary IV to 6 percentage points in favour of the female students, and to 11 percentage points in Secondary V.

1. The new, higher pass mark was applied to students entering secondary school in 1982-1983.
2. Some young people are not educated in the official education system. They may receive their schooling in reception centres, in schools that are not legally recognized or at home.

Table 2.3

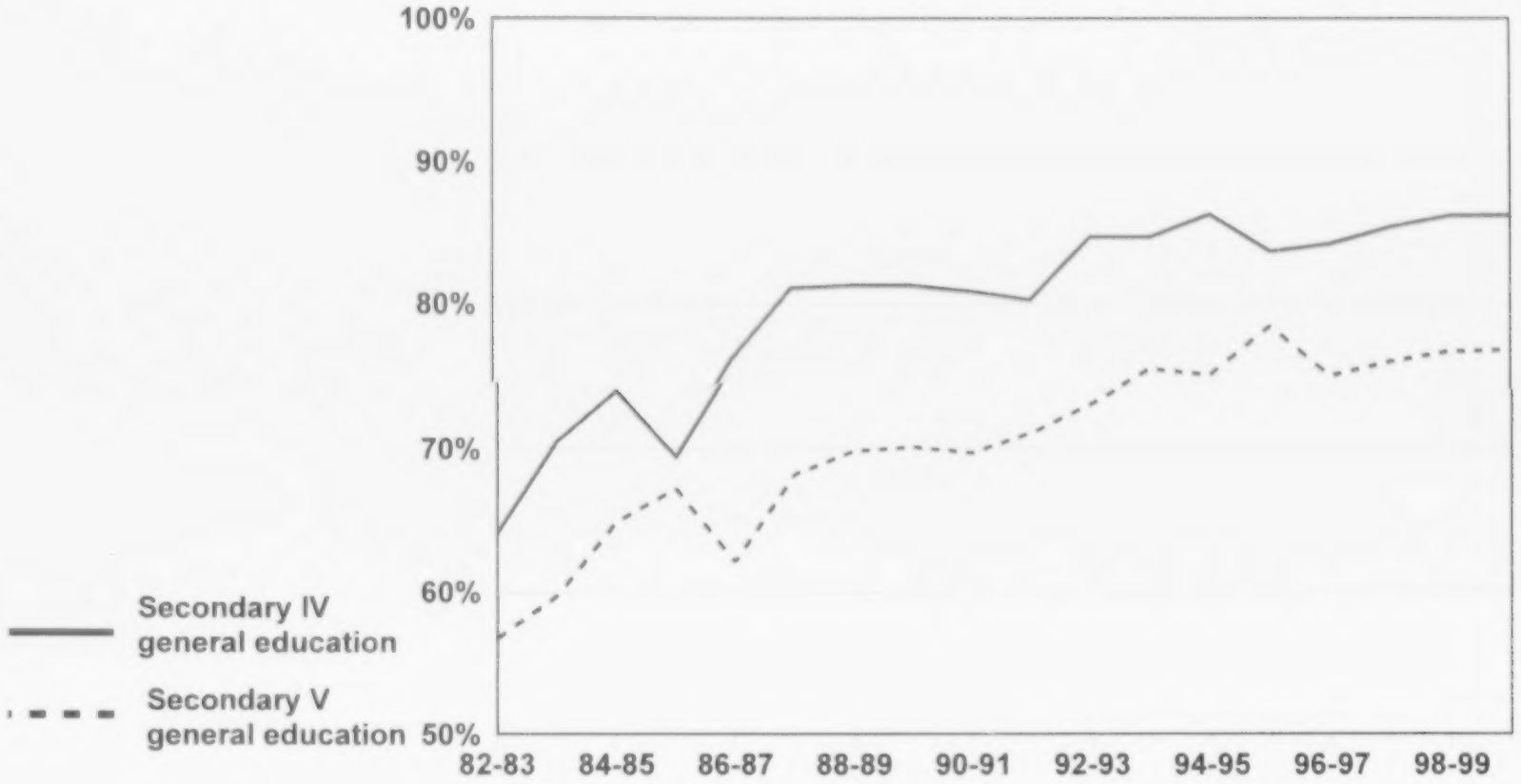
Proportion of young people enrolling in Secondary IV and V in general education in the public and private systems, by gender (%)

	1982-1983	1992-1993	1996-1997	1997-1998	1998-1999	1999-2000
Secondary IV	**64.1**	**84.7**	**84.2**	**85.4**	**86.2**	**86.2**
Male	59.9	81.6	80.7	82.0	82.9	83.0
Female	68.6	87.9	88.0	89.1	89.8	89.5
Secondary V	**56.7**	**73.1**	**75.0**	**76.0**	**76.7**	**76.8**
Male	53.6	68.4	69.9	70.4	71.0	71.4
Female	60.0	78.2	80.5	81.9	82.7	82.5

Note: Students enrolled in vocational education are not included.

Graph 2.3

Proportion of young people enrolling in Secondary IV and V in general education in the public and private systems combined (%)



2.4 Enrollment in Secondary Vocational Education–Youth and Adult Sectors

In 1999-2000, 16.4% of young people under the age of 20 enrolled in vocational education, 60% of whom already held an SSD.

The proportion of students under the age of 20 enrolling in vocational education programs was 16.4% in 1999-2000. This is almost the same rate as that observed in 1998-1999 (16.2%). Since 1984-1985, enrollment of students already holding a Secondary School Diploma (SSD) has been rising almost steadily, reaching 10.9% in 1996-1997, but dropping back to 9.8% in 1999-2000.

As short vocational programs were phased out, most students who would normally have opted for these programs in the past are now enrolled in individualized paths for learning or, more likely still, in work skills and life skills education programs, which are a part of general education. Enrollment of students without diplomas was 6.6% in 1999-2000 and represented only 40% of all people under the age of 20 enrolling in a vocational education program. This situation has been relatively stable in the past few years.

Vocational education programs attract more male than female students. Thus, in 1999-2000, 19.6% of male students opted for this path, compared with 13.1% of female students. This situation applies equally to students who had a diploma and to those who did not. This is the opposite of what has been occurring in general education in the youth sector (see Section 2.3), where female students tend to stay in school longer. Male students, who are more likely to enroll in vocational education programs than female students, more often leave general education and the youth sector.

Table 2.4

Enrollment in vocational education of students under the age of 20, youth and adult sectors combined (%)

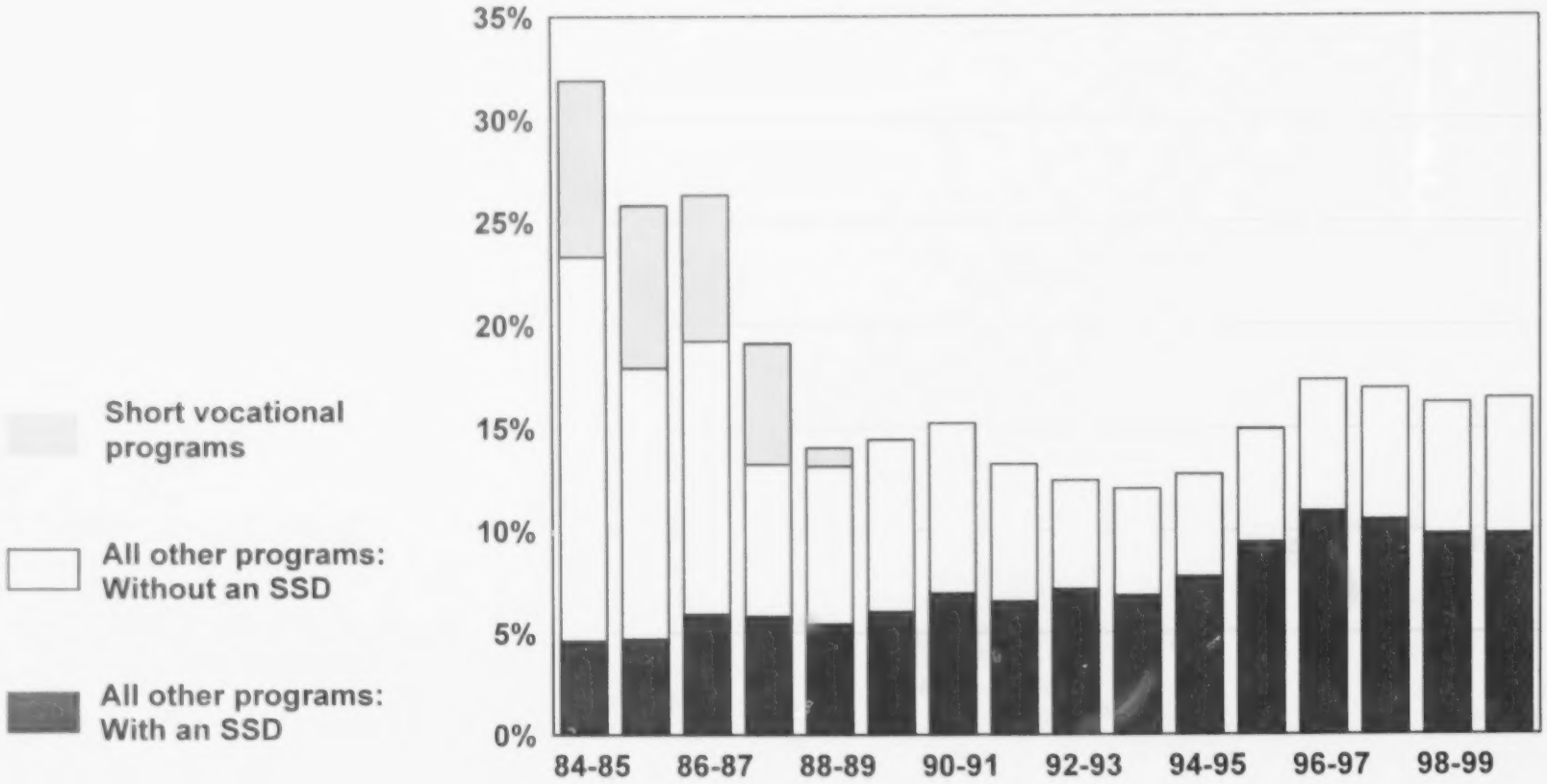
	1984-1985	1994-1995	1996-1997	1997-1998	1998-1999	1999-2000
TOTAL						
Short vocational programs[1]	8.6	–	–	–	–	–
All other programs	**23.3**	**12.8**	**17.3**	**17.0**	**16.2**	**16.4**
Without an SSD	18.7	5.0	6.4	6.4	6.4	6.6
With an SSD	4.6	7.7	10.9	10.5	9.8	9.8
MALE						
Short vocational programs[1]	11.9	–	–	–	–	–
All other programs	**21.8**	**15.0**	**20.5**	**19.8**	**19.1**	**19.6**
Without an SSD	18.2	6.6	8.7	8.4	8.6	8.8
With an SSD	3.6	8.4	11.8	11.3	10.5	10.8
FEMALE						
Short vocational programs[1]	5.2	–	–	–	–	–
All other programs	**24.8**	**10.4**	**13.8**	**14.0**	**13.2**	**13.1**
Without an SSD	19.1	3.4	4.0	4.3	4.1	4.2
With an SSD	5.7	7.0	9.8	9.7	9.1	8.9

– Not applicable

1. Most young students who enroll in short vocational programs do not have a diploma.

Graph 2.4

Enrollment in vocational education of students under the age of 20, youth and adult sectors combined (%)



2.5 Enrollment in Secondary General Education–Adult Sector

Students who do not obtain a secondary school diploma in the youth sector are not all dropouts. Many of them choose to pursue their studies in the adult sector.

In 1999-2000, 11.9% of students under the age of 20 transferred directly from the youth sector to the adult sector.

In 1999-2000, 11.9% of a school-aged generation under the age of 20 went directly from the youth sector to the adult sector in general education without interrupting their studies. In 1984-1985, such students accounted for only 1.3%; therefore, a ninefold increase. In view of this, the relatively low rate of 5.0% observed in 1992-1993 can be attributed to the changes made in the funding of educational activities for adult students in general education; at the time, this funding was part of a restricted envelope.[1] The increase observed in 1993-1994 (9%) was surely due in part to the fact that the envelope was once again opened for students 16 to 18 years of age.

An analysis of the proportion of students who, after interrupting their studies, return to school in general education in the adult sector reveals that the number of students aged 15 to 19 who returned to the adult sector was higher–until 1986-1987–than the number of students who transferred directly from the youth sector. Since then, however, the latter path has grown in popularity, and in 1999-2000, accounted for more than three quarters of all new enrollments of students under the age of 20.

The adult sector does not limit its services to providing students leaving the youth sector with the opportunity to earn their diploma through an alternative system. Adult education is also open to those who already have a secondary school diploma but wish to add to their education. And even among students without a diploma who enroll in the adult sector, some simply wish to meet a short-term need, such as acquiring the knowledge or skills taught in a specific course.

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1. As a result, the school boards had to encourage students to stay in the youth sector (whose envelope is always open), since funding for the adult sector had been reduced in 1992-1993.

Table 2.5

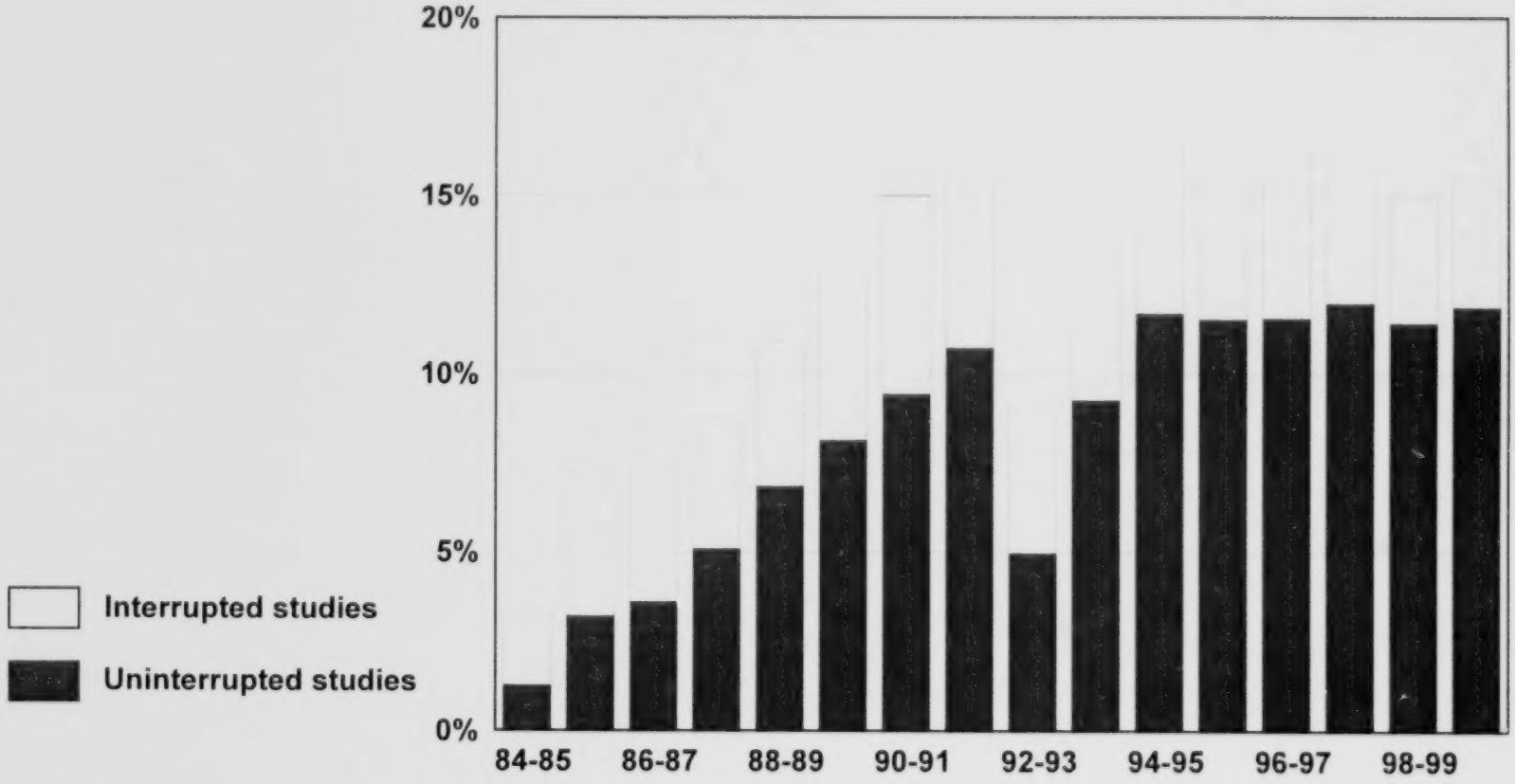
Enrollment in general education in the adult sector of students under the age of 20 without a secondary school diploma, by gender (%)

	1984-1985	1994-1995	1996-1997	1997-1998	1998-1999	1999-2000
Total	**3.2**	**17.0**	**16.1**	**15.9**	**14.9**	**15.5**
Uninterrupted studies[1] (directly from the youth sector)	1.3	11.7	11.6	12.0	11.4	11.9
Interrupted studies	2.0	5.3	4.5	3.9	3.5	3.6
Male	**3.3**	**19.3**	**18.6**	**18.0**	**17.2**	**17.8**
Uninterrupted studies[1] (directly from the youth sector)	1.4	13.6	13.5	13.7	13.3	13.7
Interrupted studies	1.9	5.7	5.1	4.3	3.8	4.1
Female	**3.1**	**14.5**	**13.5**	**13.6**	**12.5**	**13.0**
Uninterrupted studies[1] (directly from the youth sector)	1.1	9.7	9.5	10.1	9.4	9.9
Interrupted studies	2.0	4.8	4.0	3.5	3.2	3.1

1. Uninterrupted studies: Refers to students enrolled in the youth sector on September 30 of the preceding year.

Graph 2.5

Enrollment in general education in the adult sector of students under the age of 20 without a secondary school diploma (%)



2.6 Early School Leavers–Youth and Adult Sectors

In 1999-2000, 28.7% of students in the youth sector or under the age of 20 in the adult sector left school without obtaining a diploma.[1] In the mid-1970s, this rate fluctuated between 45% and 50%, but then began to slide and dropped to under 28% by the mid-1980s. The subsequent increase was caused by several factors, including the stricter graduation requirements set by the basic school regulation[2] and certain measures that stimulated the growth of the adult sector.

The probability of not obtaining a secondary school diploma rose from 11.9% in 1995-1996 to 16.5% in 1999-2000.

The number of students who leave school without a diploma is lower if the graduation rate of adults is considered. If both the youth sector and the adult sector (all ages) are taken into account, the probability of not obtaining a diploma was 16.5% in 1999-2000.

Some students with intellectual impairments leave secondary school without a diploma after attending school until the age of 21. Other students enrolled in continuous individualized paths for learning enter life skills and work skills education programs at the age of 16. The latter students may then obtain an attestation of skills issued by the school board. Although this certificate recognizes that the student has attained a certain level of achievement, it is not considered a diploma in the strict sense of the word.[3] Strictly speaking, these students cannot be considered dropouts. The same holds true for students who transfer from the youth sector to the adult sector without interrupting their studies. In 1999, the Ministère issued close to 6 100 Attestations of Equivalence of Secondary Studies.

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1. The diplomas considered here are the Secondary School Diploma (SSD–including the Short Vocational Diploma and the Long Vocational Diploma), the Secondary School Vocational Certificate (SSVC), the Diploma of Vocational Studies (DVS) (known as the Secondary School Vocational Diploma–SSVD prior to 1998), the Attestation of Vocational Specialization (AVS), the Attestation of Vocational Education (AVE) and certification for on-the-job training in a recycling facility.
2. This refers primarily to the raising of the secondary school pass mark from 50% to 60% and the introduction of an extra year of study in general education as a requirement for admission to vocational education.
3. With the changes brought about by the education reform, this will no longer be the case as of 2000-2001; these certificates will be considered secondary school diplomas.

In 1999-2000, the probability of female students not obtaining a diploma was 9.6%; for male students it was almost two and a half times higher, at 23.2%.

Table 2.6

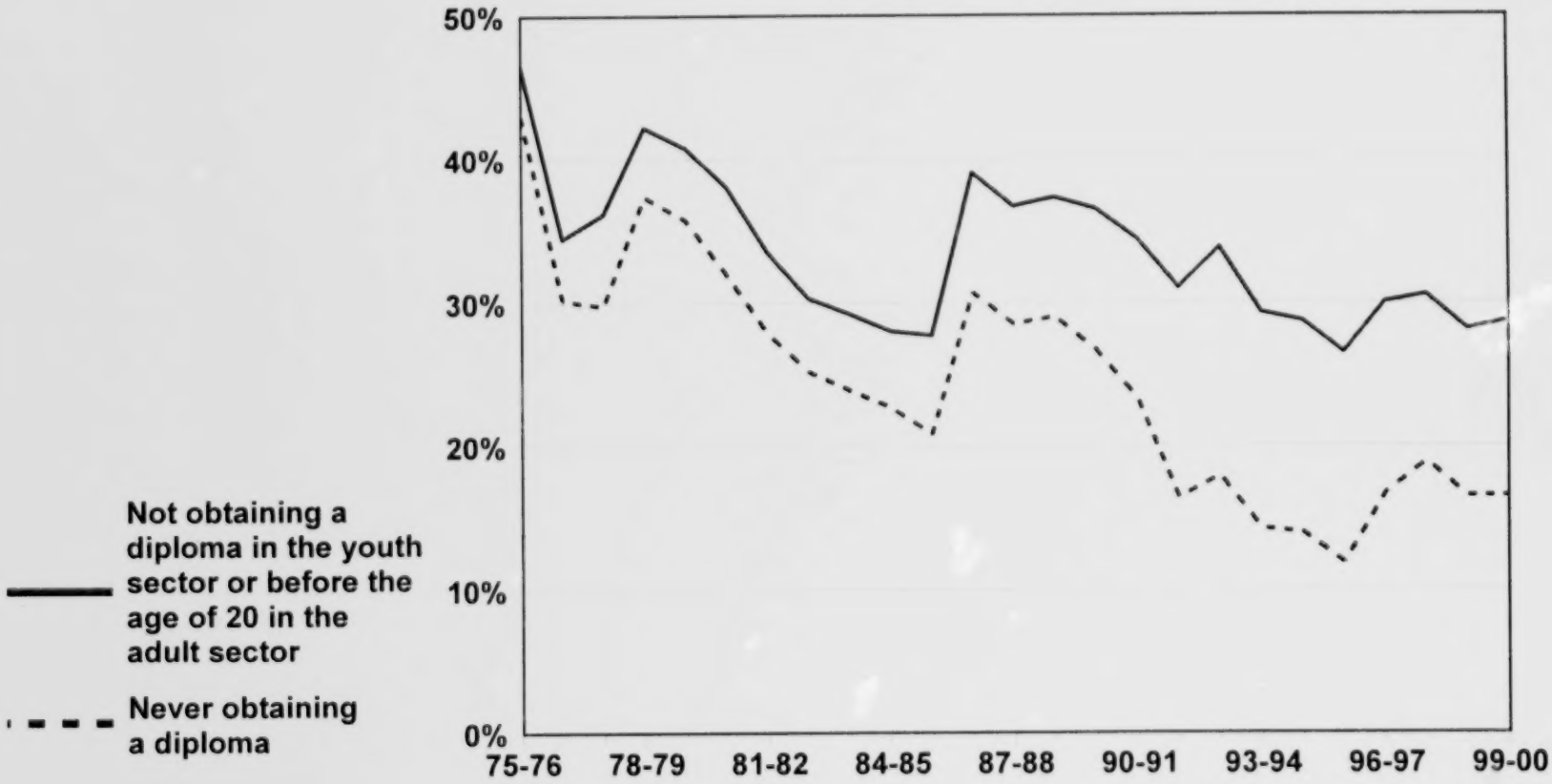
Proportion of a generation of students leaving secondary school without a diploma, by gender (%)

	1975-1976	1985-1986	1995-1996	1997-1998	1998-1999	1999-2000[e]
Total	**43.0**	**20.8**	**11.9**	**18.9**	**16.5**	**16.5**
Youth sector	47.1	28.3	29.6	33.7	31.1	32.1
Youth sector or before the age of 20 in the adult sector	46.4	27.7	26.5	30.5	28.1	28.7
Male	**48.8**	**26.9**	**18.5**	**26.0**	**23.2**	**23.2**
Youth sector	52.6	33.5	35.9	41.2	37.9	39.3
Youth sector or before the age of 20 in the adult sector	51.8	32.9	32.9	38.0	34.9	35.9
Female	**36.9**	**14.4**	**4.9**	**11.4**	**9.5**	**9.6**
Youth sector	41.5	22.7	23.0	25.8	23.9	24.5
Youth sector or before the age of 20 in the adult sector	40.9	22.1	19.7	22.6	20.8	21.1

e: Estimates

Graph 2.6

Proportion of a generation of students leaving secondary school without a diploma (%)



2.7 Dropping Out of Secondary School

Section 2.6 on *early school leavers* measures, among other things, the proportion of a generation of students who never obtain a diploma, or what is commonly termed the dropout rate.

In 1999, 10.4% of 17-year-olds were without a secondary school diploma and were not attending school. This proportion was 26.2% in 1979.

However, when the proportion of a generation of students who do not obtain a diploma before the age of 20 is analyzed, the results seem considerably less definitive, because a person without a diploma at 20 may return to school later and graduate. This section measures both official successful completion (graduation) and school attendance of those who have not yet received a diploma. The dropout rate is defined as the proportion of the population that does not attend school and has not obtained a secondary school diploma.

The proportion of the population with a secondary school diploma[1] is measured, by age. The proportion without a diploma but still in school is also measured.[2] When the two measurements are added together and deducted from 100, the figure obtained is the dropout rate by age.

Graph 2.7 shows the downward trend of the dropout rate since 1979. The increase observed in the 1980s is due to the raising of the pass mark, which made it more difficult to obtain a secondary school diploma (see Section 5.2). Normally, the dropout rate increases as age increases; for example, the dropout rate in 1999 was 19.8% for 20-year-olds, 25.7% for 25-year-olds, 24.5% for 30-year-olds, and 27.6% for 35-year-olds.

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1. The diplomas considered here are the Secondary School Diploma (SSD–including the Short Vocational Diploma and the Long Vocational Diploma), the Secondary School Vocational Certificate (SSVC), the Diploma of Vocational Studies (DVS) (known as the Secondary School Vocational Diploma–SSVD prior to 1998), the Attestation of Vocational Specialization (AVS), the Attestation of Vocational Education (AVE) and certification for on-the-job training in a recycling facility.
2. At either the secondary or college level. It is possible–although less and less in the past few years–for a person without a secondary school diploma to be accepted in college. Persons who enroll in university without a secondary school diploma are not taken into account here.

An analysis of the data for a given age reveals that the dropout rate has declined a fair amount in the past 20 years; the rate for 17-year-olds went from 26.2% in 1979 to 10.4% in 1999; for 19-year-olds, it dropped from 40.5% to 19.8% during the same period.

Table 2.8 shows the differences between male and female students and indicates that women have the advantage. In 1979, the gaps were relatively small, but they were somewhat more significant in 1999. For example, for 19-year-olds, the dropout rate for men in 1999 was almost six tenths of what it was in 1979 (24.6% compared with 43.8%); for women, the rate in 1999 was approximately four tenths of what it was in 1979 (14.7% compared with 37.2%). The situation of women has therefore improved more than that of men; this analysis also holds true for the other ages shown in Table 2.8.

Table 2.7

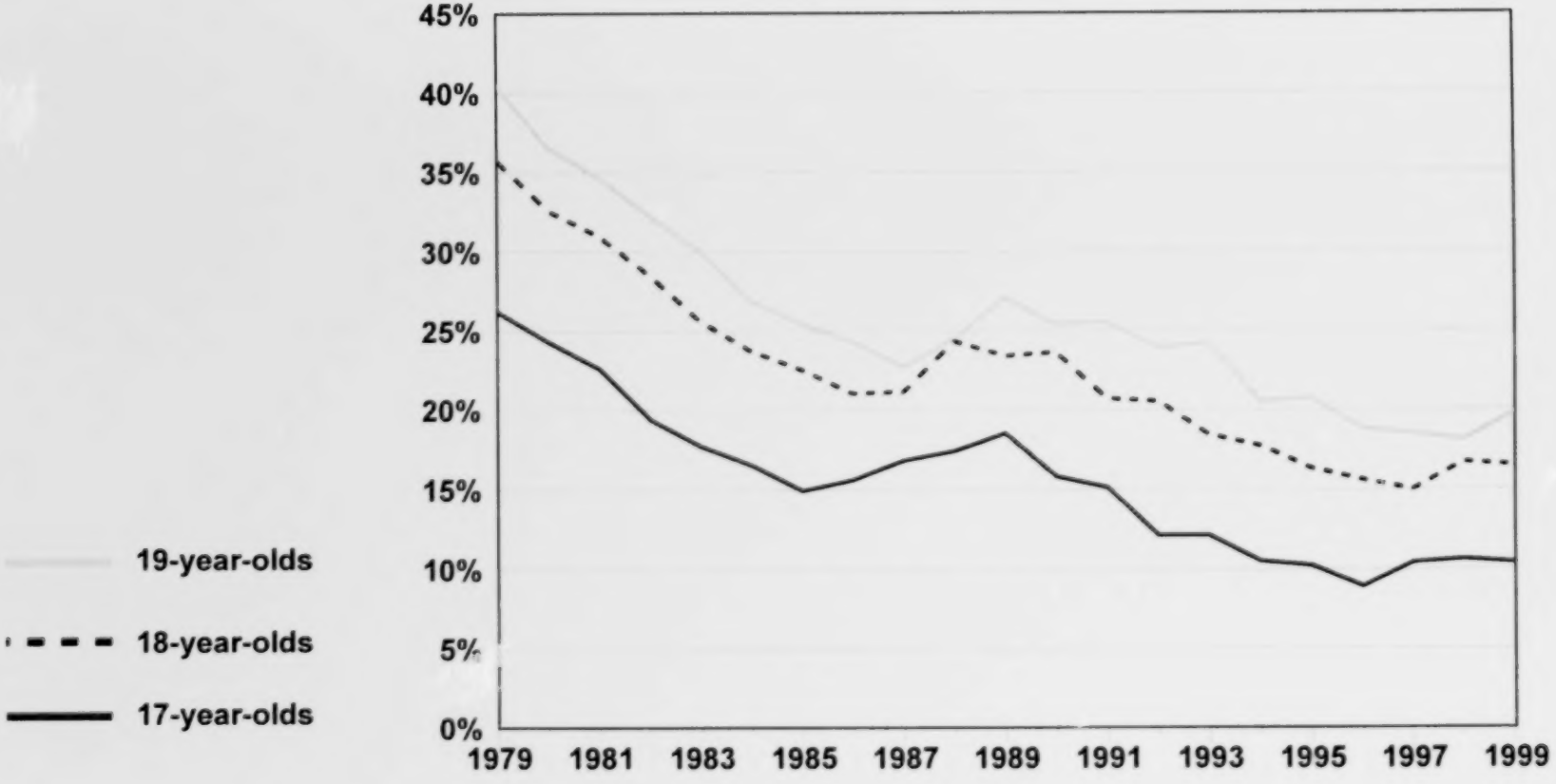
Dropout rate by age and gender (%)

	1979-1980	1984-1985	1989-1990	1994-1995	1998-1999	1999-2000[p]
17-year-olds	**26.2**	**16.5**	**18.5**	**10.5**	**10.6**	**10.4**
Male	27.6	18.8	21.3	12.1	12.9	13.3
Female	24.7	14.0	15.5	8.8	8.1	7.2
18-year-olds	**35.7**	**23.7**	**23.4**	**17.7**	**16.7**	**16.5**
Male	38.0	26.8	27.1	20.6	20.7	20.4
Female	33.2	20.4	19.6	14.6	12.5	12.4
19-year-olds	**40.5**	**26.9**	**27.1**	**20.5**	**18.1**	**19.8**
Male	43.8	30.1	31.1	24.7	22.3	24.6
Female	37.2	23.6	22.9	16.0	13.6	14.7

p: Preliminary figures

Graph 2.7

Dropout rate by age (%)



2.8 Repeating a Year in Elementary School and in Secondary General Education–Youth Sector

Since 1990-1991, the proportion of students repeating a year[1] has been dropping steadily, reaching 5.4% in 1997-1998. In 1999-2000, the proportion was 5.9%.

In 1999-2000, 18% of male students repeated Secondary I. For female students, the proportion was 12%.

The number of male students who repeat a given year is always higher than the number of female students, regardless of the school year or the grade level. The proportion of male students who repeat a year is often more than one and a half times the proportion of female students in the same situation. There are twice as many repeaters in secondary school as there are in elementary school, and the probability of repeating a year is always significantly higher in Secondary I. This situation is not surprising, considering that all elementary school students, including those with difficulties, are sooner or later promoted to secondary school, if only because they have turned 13 years of age. Moreover, students in *individualized paths for learning* may be classified for administrative purposes in Secondary I for several years.

The rate of repeating Secondary I has stayed high since 1983-1984, when it was already at 13.7%. That was the year in which the effects of raising the secondary school pass mark from 50% to 60% were first felt.[2]

In both elementary and secondary school, the first year is always the most difficult to pass. The rate of repeaters tends to dwindle as the grade level increases. Even if the proportion of students who repeat a year is relatively low in the final years of secondary school, that does not necessarily mean that student performance has improved. Indeed, some of

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1. Repeaters are those students who were in the same grade or a higher grade the preceding year. For our purposes, students in Elementary 7 and Secondary VI general education are considered repeaters.
2. The new, higher pass mark was applied to students entering secondary school in 1982-1983. Despite incomplete data, it can be established that, in 1982-1983, the proportion of repeaters was 9.2% in Secondary I. Thereafter, between 1983-1984 and 1984-1985, this proportion jumped from 7.0% to 9.3% in Secondary II. In 1985-1986, this figure increased again in Secondary III, and it continued to rise in the subsequent grades until 1987-1988.

these students have reached the age where school attendance is no longer compulsory and they either drop out of school or continue their studies in vocational education or in the adult sector.

Obviously, the cumulative effect of repeating a year is to delay students in their schooling. Thus, in 1999-2000, at the end of the normal six-year period of elementary school, 22.5% of 12-year-olds had not reached secondary school. This proportion was 26.5% for male students and 18.2% for female students.

Grade repeating lengthens the duration of studies, but early school leaving shortens it. While the average duration of secondary studies is 5 years, it is 5.2 years or so for students leaving with a diploma, but only 4.2 years[3] for those leaving without one.

The rates at which the grades at the elementary level are repeated will be affected in the coming years because of changes due to the education reform.

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3. These durations do not take into account the time spent in elementary education, which is generally longer for students who do not finish their secondary studies.

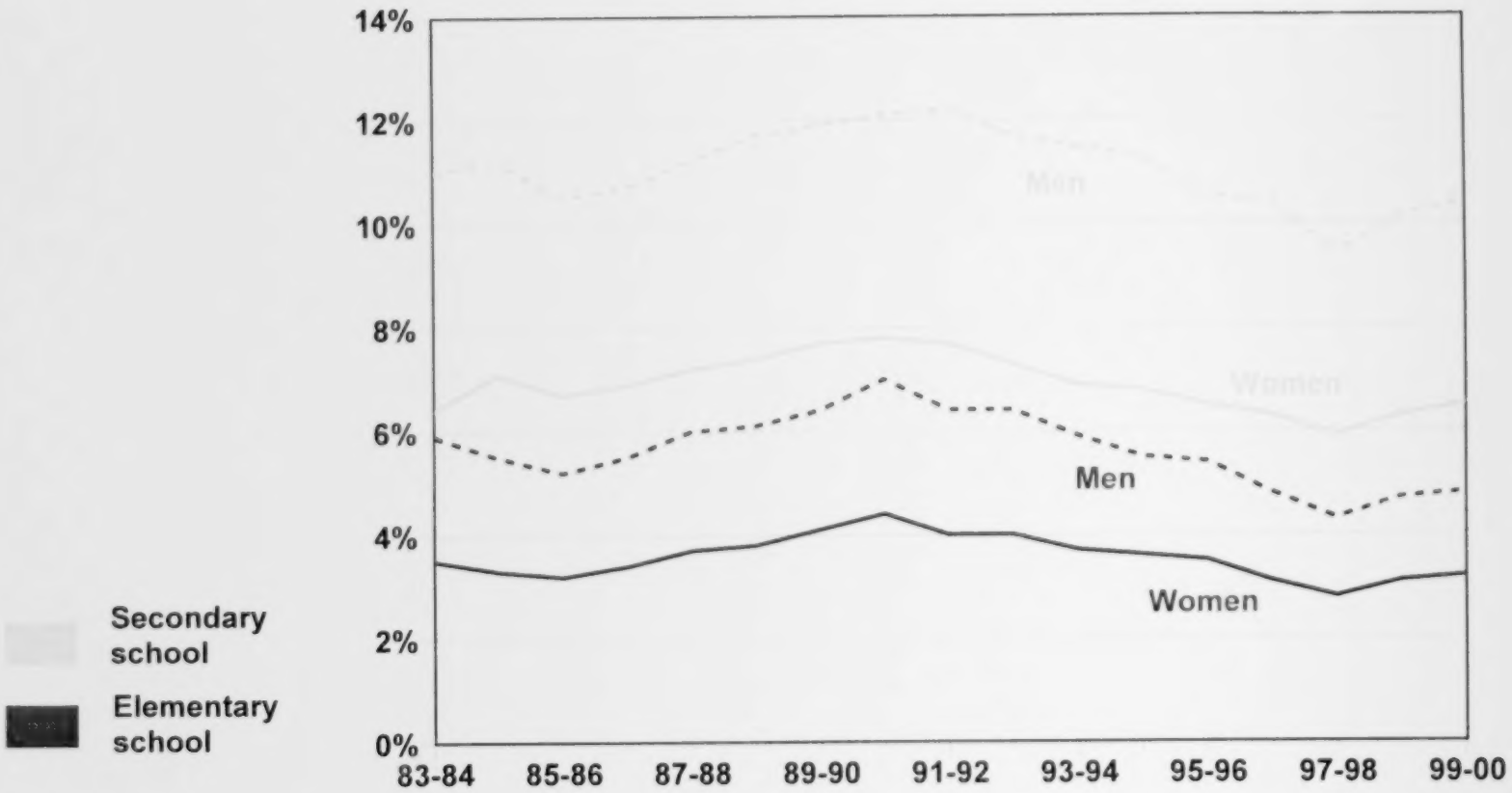
Table 2.8

Proportion of students repeating a year, by level of education and gender (%)

	1983-1984	1990-1991	1996-1997	1997-1998	1998-1999	1999-2000
Elementary school	**4.7**	**5.7**	**4.0**	**3.6**	**3.9**	**4.0**
Male	5.9	7.0	4.8	4.3	4.7	4.8
Female	3.5	4.4	3.1	2.8	3.1	3.2
Secondary school (general education)	**8.7**	**10.0**	**8.4**	**7.7**	**8.2**	**8.5**
Male	11.0	12.1	10.4	9.4	10.1	10.4
Female	6.4	7.8	6.3	5.9	6.3	6.5
Secondary I	**13.7**	**15.7**	**15.2**	**14.1**	**14.5**	**15.1**
Male	16.9	18.6	18.4	16.9	17.6	18.1
Female	10.1	12.4	11.6	10.8	11.1	11.6
Total	**6.5**	**7.6**	**6.0**	**5.4**	**5.8**	**5.9**
Male	8.1	9.2	7.4	6.6	7.1	7.2
Female	4.8	5.9	4.6	4.2	4.5	4.6

Graph 2.8

Proportion of students repeating a year, by level of education and gender (%)



2.9 College Enrollment–Regular Education[1]

In 1999-2000, 59.7% of a generation of young Quebeckers went on to college. This percentage is almost 4 percentage points lower than the rate observed in 1996-1997, just before the drop in the secondary school graduation rate and the tightening of the criteria for admission to CEGEP.[2]

In 1999-2000, college enrollment rose by 1.4 percentage points to 59.7%, marking the second consecutive increase since it dropped in 1997-1998.

Enrollment in college (regular education) rose by almost 22 percentage points between 1975-1976 and 1986-1987 (from 39.3% to 61.2%), followed by a drop of 4.6 percentage points in 1987-1988. In the six years thereafter, it rose by 10 percentage points, reaching a new high of 66.7% in 1993-1994. Since then, enrollment has dropped by 7.0 percentage points for all young Quebeckers.

Since the late 1970s, changes in college enrollment can be largely explained by trends observed at the secondary level in the youth sector: first a rise in the graduation rate in secondary general education until 1985-1986, followed by a drop in the graduation rate owing to the application of tighter standards at the end of the 1980s, then by a return to an upward trend at a slower pace from 1990-1991 to 1995-1996, ending with a sudden drop in 1996-1997, which was finally stopped in 1998-1999.

There is a close correlation between obtaining a secondary school diploma in general education in the youth sector or before the age of 20 in the adult sector and enrolling in college. This correlation would seem to indicate that the majority of general education graduates, as well as a certain number of vocational education graduates, eventually go on to college.

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1. The figures mentioned here include only students enrolled for the first time in programs leading to a Diploma of College Studies (DCS) in regular education.
2. Since the fall of 1997, students who enroll in CEGEP must not only have their SSD, but must also have successfully completed the following courses: Secondary V language of instruction and second language, Secondary IV history and physical science, and Secondary V mathematics or comparable Secondary IV mathematics.

Over a period of 15 years or so, the gap between men and women going on to college widened steadily. Although rather negligible in the mid-1970s, the difference reached 17.7 percentage points in favour of women in 1999-2000, with women having regained the most ground in the past two years.

College enrollment also varies with the type of education involved. Since 1984-1985, the probability of enrolling in pre-university education has dropped slightly, going from 34.7% to 34.8% in 1999-2000, after reaching a high of 43.8% in 1992-1993. The probability of enrolling in technical education at college declined from 21.4% to 18.0% from 1986-1987 to 1989-1990, to return to 21.3% in 1992-1993 and then settle at 19.3% in 1999-2000.

In recent years, the only regular education programs where enrollment has increased is Explorations. In 1993-1994, 4.9% of students undertook college studies in this type of program; in 1999-2000, the figure was 5.6%, which, out of a total of 59.7%, represents close to one in ten new enrollments.

Table 2.9

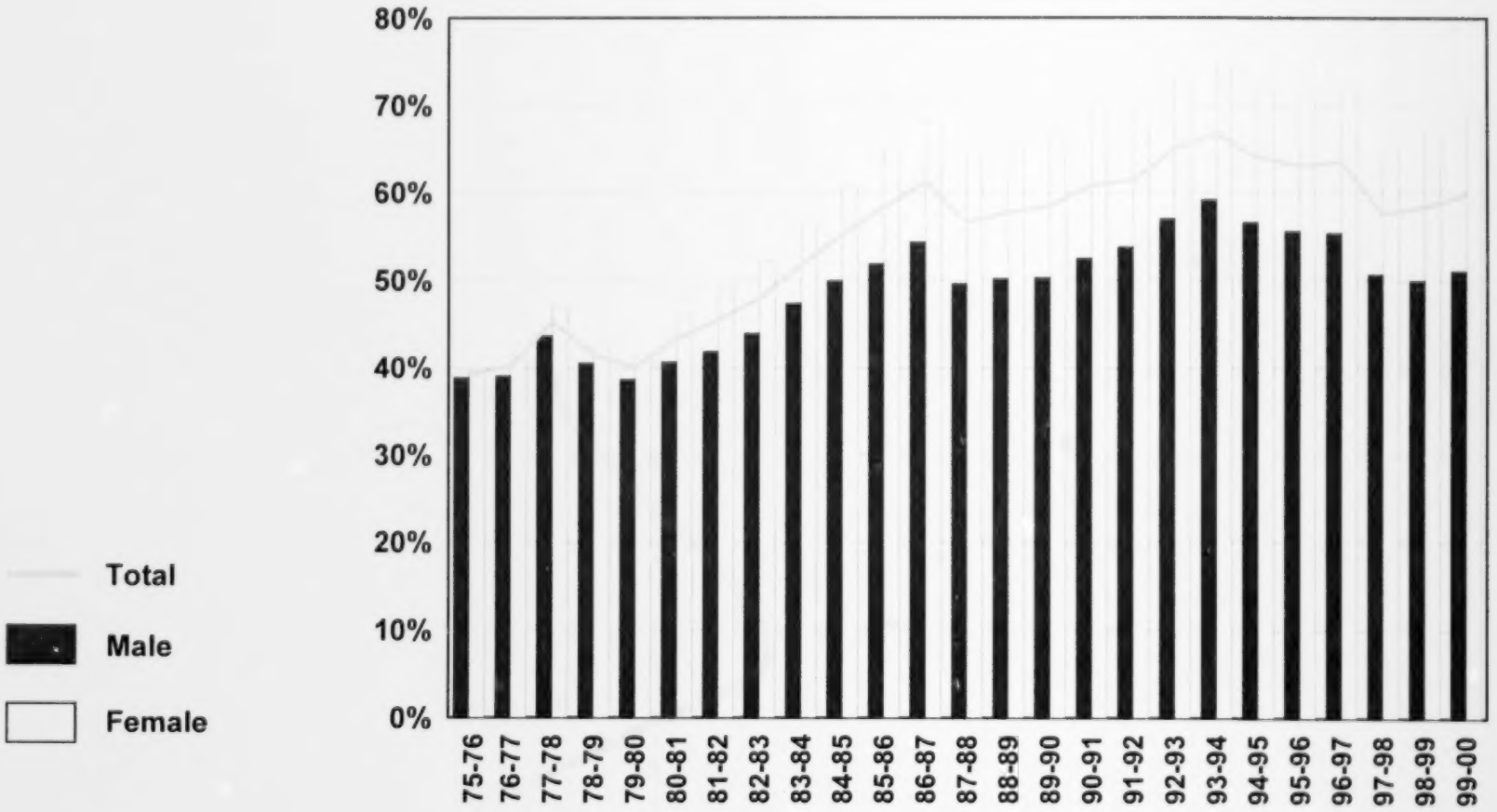
Full- or part-time enrollment in regular education in public or private colleges, by gender and type of education (%)

	1975-1976	1985-1986	1995-1996	1997-1998	1998-1999	1999-2000
Male	**38.9**	**51.9**	**55.6**	**50.7**	**50.0**	**51.1**
Pre-university education	25.4	34.2	31.3	27.0	26.6	27.3
Technical education	13.4	17.7	18.4	18.3	17.8	17.7
Explorations	–	–	5.9	5.4	5.6	6.2
Female	**39.6**	**64.9**	**71.0**	**64.9**	**67.0**	**68.8**
Pre-university education	22.5	40.9	44.6	40.7	41.8	42.7
Technical education	17.1	23.9	20.2	19.5	20.3	21.1
Explorations	–	–	6.1	4.7	4.8	5.0
Total	**39.3**	**58.3**	**63.1**	**57.6**	**58.3**	**59.7**
Pre-university education	24.0	37.5	37.8	33.6	34.0	34.8
Technical education	15.3	20.8	19.3	18.9	19.0	19.3
Explorations	–	–	6.0	5.0	5.2	5.6

–: Not applicable

Graph 2.9

Full- or part-time enrollment in regular education in private or public colleges, by gender (%)



2.10 Going Directly From College to University

In 1998-1999, 79.3% of pre-university education graduates and 20.0% of technical education graduates went on to university in the year following their graduation from college.

The main objective of college pre-university education is to prepare students for university. In 1998-1999, 79.3% of students aged 24 or under with a diploma in a pre-university program[1] were enrolled in university on March 31, 2000. This proportion is comparable to the 79.2% observed on March 31, 1999, among 1997-1998 graduates. More than 79.4% of women graduates of pre-university education were enrolled in university in 2000, which is comparable to the percentage of men in the same situation (79.2%).

The proportion of graduates of pre-university education going on to university without interrupting their studies has decreased in comparison with the rates observed in the 1980s. In fact, the proportion of pre-university graduates who attend university the year following their Diploma of College Studies (DCS) declined from 86.2% in 1990-1991 to 78.6% in 1995-1996. The rate of enrollment in university of students aged 24 or under with a diploma in a pre-university program has remained between 78.6% and 80.0% since 1992-1993.

In 2000, 20.0 % of students aged 24 or under with a diploma in a technical program in 1998-1999 were enrolled in university the following year. These results represent the highest proportion since 1984.

More men aged 24 or under with a diploma in a technical program have been enrolling in university than their female counterparts since 1982-1983.

1. This refers to students who, between the months of September and August of a given school year, were enrolled in the last year of a college program and successfully completed their studies. Furthermore, these students did not attend a CEGEP, private college certified for purposes of funding or government institution during the fall term following the completion of their studies.

Table 2.10

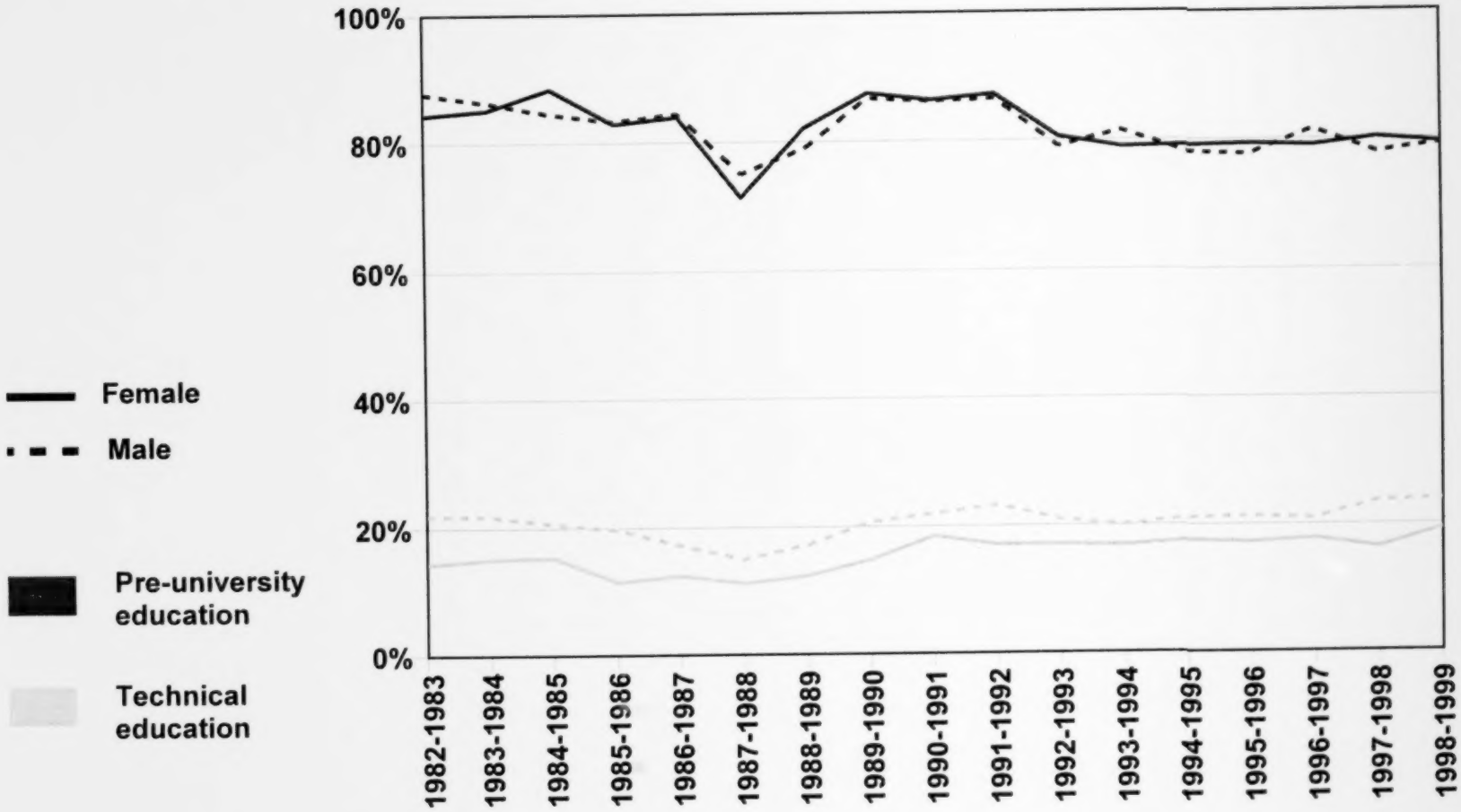
Proportion of college graduates (24 years old and under) going on to university without interrupting their studies, by type of education and gender (%)

	1982-1983[1]	1990-1991	1995-1996	1996-1997	1997-1998	1998-1999
Pre-university education	**86.0**	**86.2**	**78.6**	**80.0**	**79.2** [2]	**79.3**
Male	87.7	86.1	77.7	81.5	77.9 [2]	79.2
Female	84.3	86.3	79.3	79.0	80.2 [2]	79.4
Technical education	**17.4**	**19.8**	**18.9**	**19.0**	**19.2** [2]	**20.0**
Male	21.9	22.0	21.4	21.0	23.7 [2]	23.9
Female	14.4	18.5	17.3	17.8 [2]	16.4 [2]	19.3

1. Year of graduation
2. Revised data

Graph 2.10

Proportion of college graduates (24 years old and under) going on to university without interrupting their studies, by type of education and gender (%)



2.11 University Enrollment

This section concerns only enrollment in programs leading to a university degree at the bachelor's, master's or doctoral level. Enrollment in certificate programs and nonprogram studies are not measured here.

In 1999-2000, the proportion of students enrolling in university studies leading to a bachelor's degree stood at 35.8%, the same level as that observed 10 years earlier.

In 1992-1993, the proportion of a generation enrolled for the first time in programs leading to a bachelor's degree increased by one third over an 8-year period, climbing to 39.7% from 30.1% in 1984-1985. Since 1992-1993, there has been a decline of 3.9 percentage points in enrollment in bachelor's programs, lowering the probability of enrolling in university to 35.8% in 1999-2000. A similar decline was observed in enrollment in college pre-university programs after 1992-1993 (see Section 2.9).

Over this 15-year period, only women showed veritable gains in enrollment in bachelor's programs: an increase of 11.0 percentage points brought them to 42.3% in 1999-2000, whereas men (29.6%) were barely above the level observed in 1984-1985. The gap between the sexes was 12.7 percentage points, whereas it had been 2.3 percentage points 15 years earlier.

With respect to master's programs, enrollment rose for a second time to 9.5% after dropping for the first time in 1997-1998. Here too, gains were more favourable for women, whose enrollment rate was 9.8% in 1999-2000, compared with 9.2% for men. In 1984-1985, the difference was 1.5 percentage points in favour of men. At the master's level, women began showing definitive gains over men in 1993-1994. The overall increase in enrollment in master's programs (2.7 percentage points) between 1984-1985 and 1999-2000 was relatively greater than that observed at the bachelor's level, where there has in fact been a decrease in enrollment over the last 7 years.

The growing interest in doctoral studies is significant even though it applies to only a small portion of the population. Enrollment rose from 1.1% in 1984-1985 to 1.9% in 1999-2000. Men continue to enroll in doctoral studies in slightly greater numbers (2.1%) than women (1.8%), but the number of women enrolling at this level has increased more rapidly in the last 15 years.

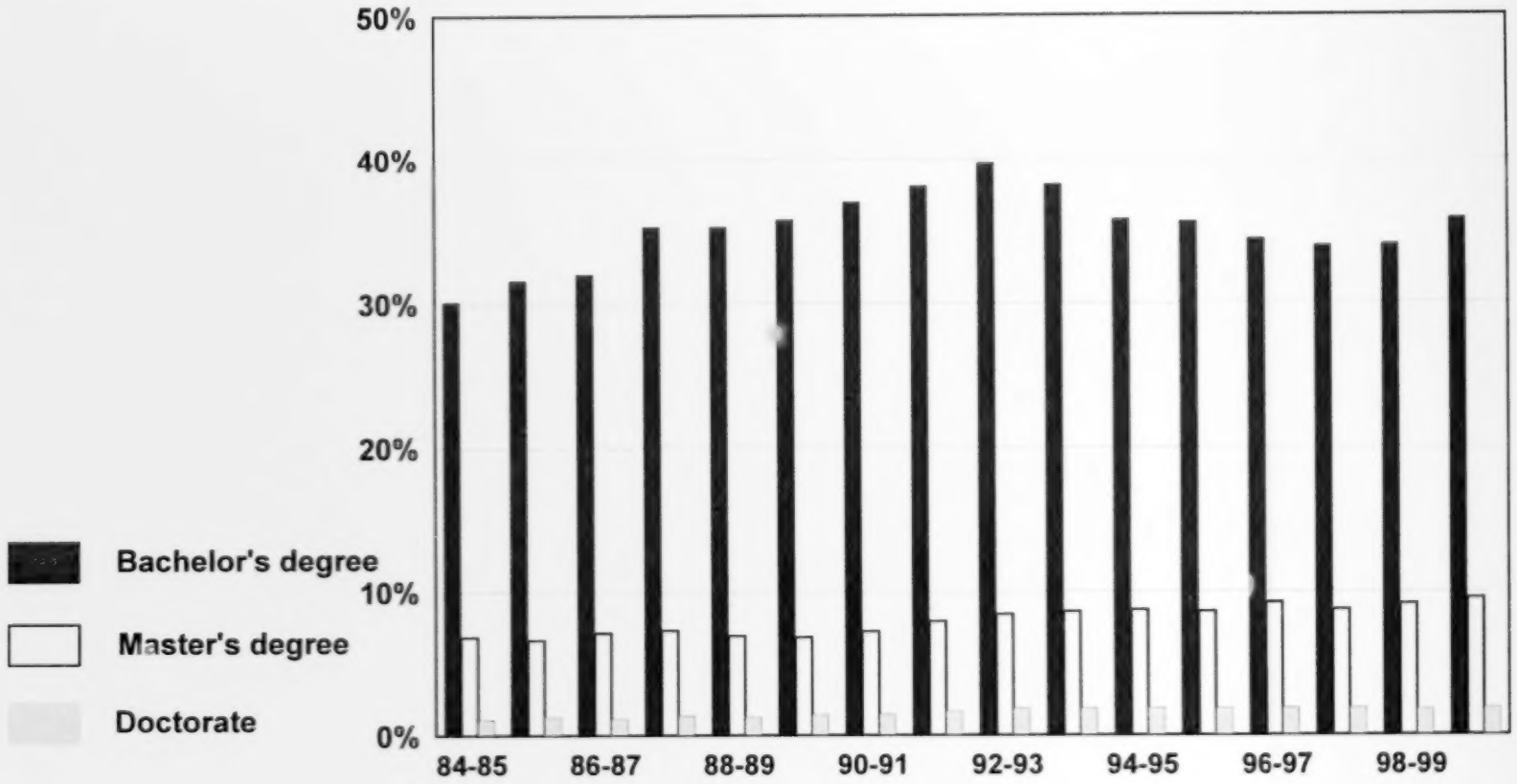
Table 2.11

Enrollment in programs leading to a university degree, by gender (%)

	1984-1985	1989-1990	1992-1993	1997-1998	1998-1999	1999-2000
Bachelor's programs						
Male	29.0	31.9	34.8	28.9	27.7	29.6
Female	31.3	39.9	44.9	39.1	40.5	42.3
Total	**30.1**	**35.8**	**39.7**	**33.9**	**34.0**	**35.8**
Master's programs						
Male	7.5	7.0	8.5	8.4	8.8	9.2
Female	6.0	6.7	8.3	8.9	9.4	9.8
Total	**6.8**	**6.8**	**8.4**	**8.7**	**9.1**	**9.5**
Doctoral programs						
Male	1.4	1.9	2.3	1.9	1.9	2.1
Female	0.8	1.1	1.4	1.8	1.6	1.8
Total	**1.1**	**1.5**	**1.9**	**1.9**	**1.8**	**1.9**

Graph 2.11

Enrollment in a program leading to a university degree (%)



2.12 Training of Researchers

Students enrolled in a program leading to a doctorate are probably the most likely to go into university research. In the fall of 1999, these students numbered 8 679. From 1990 to 1999, their number increased by 23%, despite a 6.4% decrease between 1997 and 1999.

In the fall of 1999, 32% of doctoral students were enrolled in social sciences, 17% in applied sciences, 16% in pure sciences and 12% in health sciences.

Enrollment in doctoral programs is mainly concentrated in social sciences, pure and applied sciences, and health sciences. In 1999, 32% of doctoral candidates were in social sciences, 17% in applied sciences, 15% in pure sciences and 12% in health sciences.

Men accounted for most of the students enrolled in a program leading to a doctorate (54% in the fall of 1999, compared with 46% for the women). In 1990, the percentages were 65% and 35%, respectively. From 1990 to 1999, the increase in the number of women enrolled in doctoral programs (59%) was greater than it was for men (4%).

In 1999, approximately 80% of the men in doctoral programs were enrolled in social sciences (26%), applied sciences (24%), pure sciences (19%) and health sciences (11%). The number of men enrolled in business administration has increased the most since 1990, that is, by 87%.[1]

The distribution of enrollments in doctoral programs differs for women and men. In the fall of 1999, 39% of the female students were in social sciences, 13% were in health sciences, 10% were in literature, 11% were in pure sciences and 9% were in applied sciences. The largest annual increases in female enrollment since 1990 have been in the fields of law (179%), the arts (155%), applied science (114%), business administration (68%), and health sciences (76%).[2]

1. Male enrollment in interdisciplinary studies, which went from 39 in 1990 to 58 in 1999, is not taken into consideration.
2. Female enrollment in interdisciplinary studies, which went from 21 in 1990 to 38 in 1999, is not taken into consideration.

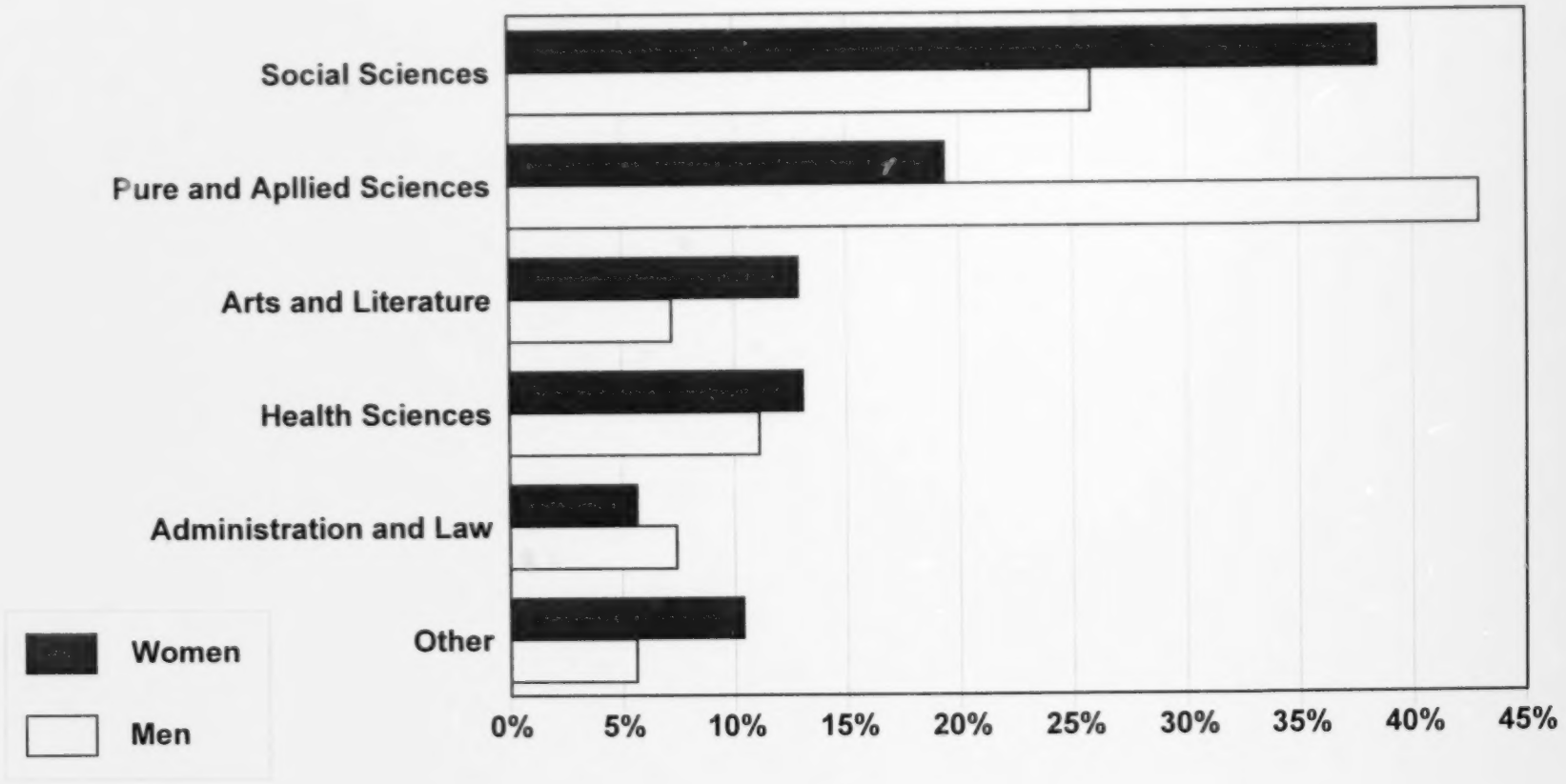
Table 2.12

Enrollment in doctoral programs, by field of study, 1990 to 1999 (fall term)

	1990	1993	1995	1997	1998	1999
Arts	96	101	120	157	175	186
Literature	654	708	770	770	690	665
Business administration	258	334	391	474	482	463
Law	58	79	103	105	107	108
Education	549	547	587	609	594	560
Social sciences	2 168	2 559	2 730	2 830	2 862	2 746
Pure sciences	1 229	1 516	1 506	1 434	1 365	1 347
Applied sciences	1 276	1 708	1 715	1 558	1 433	1 447
Health sciences	662	798	958	1 053	1 021	1 041
Interdisciplinary studies	60	101	126	125	105	96
Not applicable	27	41	171	153	17	20
Total	**7 037**	**8 492**	**9 177**	**9 268**	**8 856**	**8 679**

Graph 2.12

Distribution of enrollments in doctoral programs, by gender and field of study, fall 1999



3.1 Success in Secondary Cycle Two of General Education–Adult Sector[1]

Of the students in general education in the adult sector who left secondary school in 1998-1999, 14.5% obtained a diploma. If only students in Cycle Two are considered, the proportion more than triples, to 45.3%. Of the various instructional services offered,[2] only Secondary Cycle Two normally leads to a diploma. Figures for new enrollments broken down according to instructional service are available as of 1988-1989 only. These figures show that the proportion of graduates was 23.2% for students leaving Secondary Cycle Two; the rate has therefore more than doubled since that time.

For students under the age of 20 who were enrolled in Secondary Cycle Two in the adult sector in 1998-1999, the probability of obtaining a diploma was 54.4%.

Although the earning of a diploma is not the most appropriate criterion for measuring success in the other instructional services, it can nevertheless be observed that the proportion of graduates is on the rise among students in all the instructional services in the adult sector. Since 1980-1981, this proportion has risen from 11.5% to 14.5%. This increase is due primarily to the fact that fewer students are dropping out of instructional services that do not lead directly to a diploma. Instead of quitting school, students pursue their studies in another instructional service and thus enter Cycle Two and eventually earn a secondary school diploma.

Among students leaving school, the proportion who hold a diploma is higher for those under the age of 20 than for all ages combined. Thus, in Secondary Cycle Two, 54.4% of the students leaving before the age of 20 did so with a diploma; progress has been considerable in this respect, because the corresponding proportion for 1988-1989 was

---

1. Success in general education is measured here by the proportion of new holders of a diploma among all general education students leaving secondary school with or without a diploma. The diplomas counted are those obtained during or at the end of the last year of enrollment or the following year, if the student has not re-enrolled. Students are considered to have left school without a diploma when they have been absent for a period of at least two years following the last year of enrollment.
2. The following instructional services are offered, or were offered in the past, in general education in the adult sector: Integration into Community Life Program (ICLP), sociovocational integration, pre-employment training activities (PTA), literacy, francization, adults educated in the youth sector, study skills and career planning, presecondary education, secondary cycle one, secondary cycle two, vocational education preparation, postsecondary education preparation and preparation for higher education.

36.3%. With respect to instructional services as a whole, the proportion of those under the age of 20 leaving with a diploma went from 22.0% to 24.1% between 1980-1981 and 1998-1999.

In 1980-1981, the graduation rate was slightly higher for male students than for female students, but the situation has since reversed. In 1998-1999, the graduation rate for female students exceeded that of male students by 3.3 percentage points, and this difference was 9.7 percentage points for those under 20 years of age.

Table 3.1

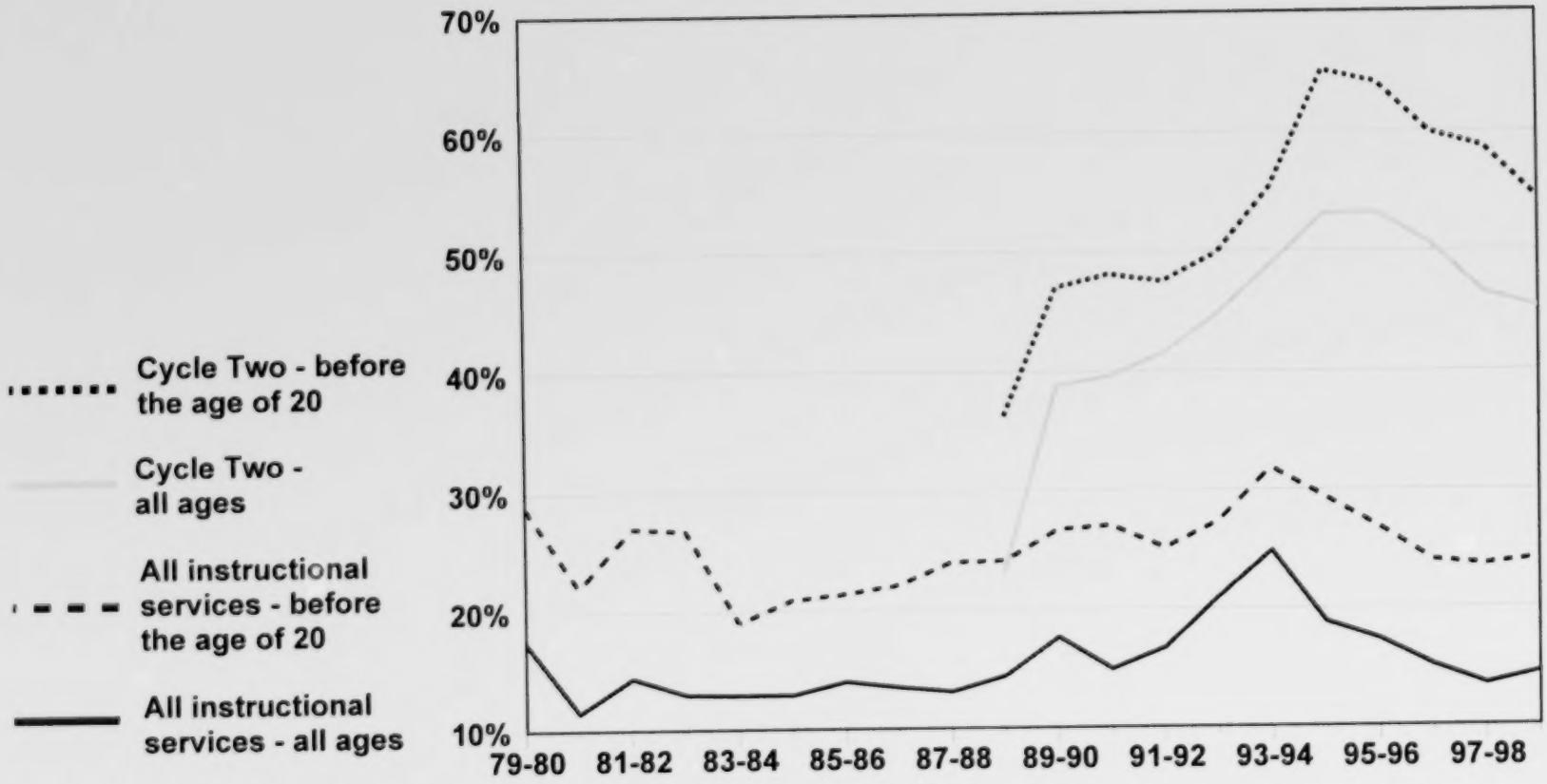
Proportion of students leaving general education in the adult sector with a diploma,[1] by gender, instructional service, age and last year of enrollment (%)

	1980-1981	1988-1989	1990-1991	1995-1996	1997-1998	1998-1999[e]
Male						
Secondary Cycle Two	N/A	22.7	37.3	50.1	43.9	42.8
Before the age of 20	N/A	36.2	45.3	60.7	55.2	51.4
All instructional services	13.1	13.2	13.1	14.9	12.0	12.9
Before the age of 20	23.1	22.4	23.8	22.3	19.5	20.1
Female						
Secondary Cycle Two	N/A	23.6	41.3	55.8	48.7	47.6
Before the age of 20	N/A	36.4	50.8	67.5	62.3	57.7
All instructional services	10.3	15.3	16.5	20.0	15.1	16.2
Before the age of 20	20.8	25.8	30.8	33.1	29.2	29.8
Total						
Secondary Cycle Two	N/A	23.2	39.6	53.2	46.5	45.3
Before the age of 20	N/A	36.3	48.1	64.1	58.7	54.4
All instructional services	11.5	14.4	14.9	17.3	13.5	14.5
Before the age of 20	22.0	24.1	27.0	26.8	23.6	24.1

N/A: Data not available
e: Estimates
1. All secondary school diplomas are taken into account.

Graph 3.1

Proportion of students leaving general education in the adult sector with a diploma, by last year of enrollment (%)



3.2 Success in Secondary Vocational Education[1]

Of the students in vocational education who left secondary school in 1998-1999, 57.1% obtained a diploma. If only full-time students are considered,[2] the proportion of graduates climbs to 79.1%.

At the end of 1998-1999, the success rate for students enrolled full time[2] in a vocational education program was 79.1%; this rate has remained stable since the beginning of the 1990s.

Since the beginning of the vocational education reform in 1987-1988, the percentage of graduates has increased appreciably. For example, at the end of 1998-1999, the proportion of students graduating from programs leading to a Diploma of Vocational Studies (DVS) (known as the Secondary School Vocational Diploma–SSVD prior to 1998) was 69.0%, compared with 43.4% in 1988-1989. The graduation rate for long vocational programs has not increased much since the beginning of the 1980s, but data on long vocational programs concerned only the youth sector. If only full-time students are considered,[2] progress is more evident. As noted earlier, the proportion of graduates among students enrolled for the last time in 1998-1999 was 79.1%, compared with 56.3% for students enrolled for the last time in 1980-1981.

However, if we consider all school leavers without taking into account the sector or whether enrollment is full-time or part-time, the proportion of diplomas has also increased since the early 1980s. Thus, the graduation rate of persons enrolled in vocational education for the last time in 1980-1981 was 46.6%. This overall proportion rose to 57.1% in 1998-1999.

There was a significant decline in the number of new enrollments in vocational education during the 1980s (see Section 2.4). Students are now required to spend more time in general education before being admitted into vocational

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1. Success in vocational education is measured here by the proportion of new holders of a diploma among all vocational education students leaving secondary school with or without a diploma. The diplomas counted are those obtained during or at the end of the last year of enrollment or the following year, if the student has not re-enrolled. Students are considered to have left school without a diploma when they have been absent for a period of at least two years following the last year of enrollment.
2. Students enrolled for 270 course hours or more per year are considered to be full-time.

education. General education graduates still have higher success rates in vocational education than students who do not already have a diploma. This explains in large part the higher success rate observed for all school leavers in recent years.

There are varying differences in the results of male and female students over the years. For programs leading to a DVS, the success rate for male students is 2 to 10 percentage points higher than for female students. Moreover, the differences are reversed, as well as higher, when only the overall graduation rate by gender is considered. In this case, the success rate for female students is higher: for example in 1998-1999, it was 61.5%, compared with 53.7% for male students. This is due to the fact that female enrollment in vocational education is primarily concentrated in categories where success is higher, that is, diploma programs and full-time studies.

Table 3.2

Proportion of students leaving secondary vocational education with a diploma,[1] by gender, category and last year of enrollment (%)

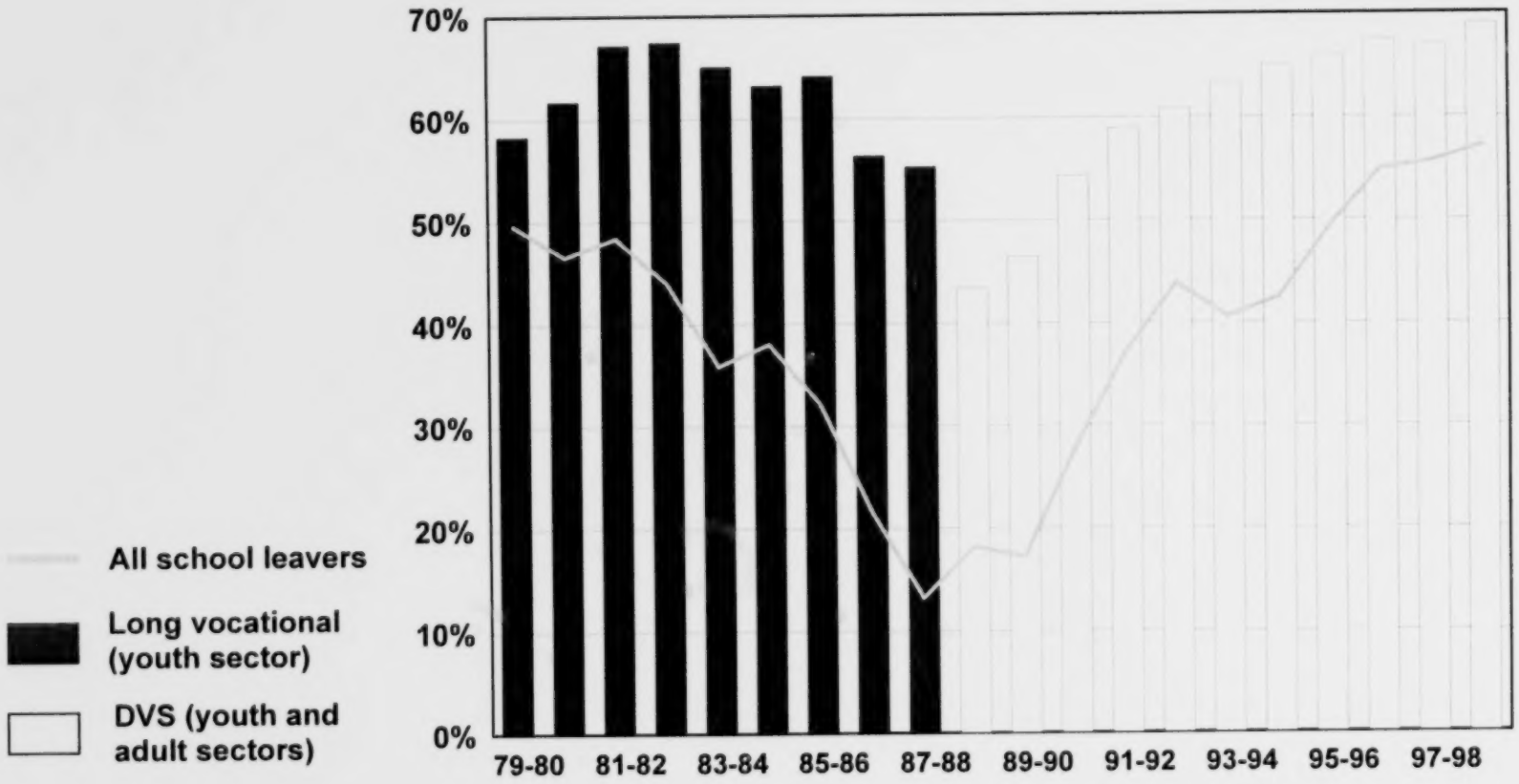
	1980-1981	1985-1986	1990-1991	1995-1996	1997-1998	1998-1999[e]
Male						
Long vocational or DVS[2]	57.1	58.3	59.9	67.6	68.0	69.8
Full-time[3]	51.8	51.4	81.0	79.4	78.9	79.0
All male school leavers	48.3	28.7	21.3	45.9	49.6	53.7
Female						
Long vocational or DVS[2]	65.5	69.5	50.2	64.4	65.8	68.2
Full-time[3]	61.3	62.0	79.9	78.2	77.5	79.3
All female school leavers	45.2	36.2	39.3	53.9	59.5	61.5
Total						
Long vocational or DVS[2]	61.7	64.1	54.3	66.0	66.9	69.0
Full-time[3]	56.3	56.6	80.5	78.9	78.2	79.1
All school leavers	46.6	32.1	27.8	49.4	55.6	57.1

e: Estimates

1. All secondary school diplomas are taken into account.
2. Figures for 1980-1981 and 1985-1986 cover enrollment in long vocational programs in the youth sector. After 1988-1989, figures take into account DVSs in the youth and adult sectors.
3. Students enrolled for 270 course hours or more per year are considered to be full-time.

Graph 3.2

Proportion of students leaving secondary vocational education with a diploma, by last year of enrollment (%)



3.3 Success in Pre-University Programs in Regular College Education[1]

Of the students enrolled in pre-university education who left college at the end of 1998-1999, 70.1% obtained a DCS, for an increase of almost 5 percentage points over the three previous years.

Of the students in pre-university programs who left regular college education at the end of the 1998-1999 school year, 70.1% obtained a Diploma of College Studies (DCS). In the past 18 years, this graduation rate has fluctuated between 63.9% and 71.6%. A significant increase in the success rate has been observed since 1995-1996, and an even bigger increase since 1996-1997. The stricter admission criteria that came into effect in the fall of 1997 (see Section 2.9) largely explain this increase, because fewer of the students who are most likely to quit their studies are able to enroll in college. Special fees levied for each course not successfully completed (with the exception of the first course) may also have contributed to the increased success rate.

In this area, women tend to do better than men and the gap in their favour has grown over the years. In 1980-1981, the proportion of women finishing their pre-university education with a DCS surpassed that of men by 3.9 percentage points. In 1998-1999, the gap was 14.5 percentage points in favour of women (10.9 in 1995-1996). This phenomenon, coupled with the fact that more women than men enroll in college (see Section 2.9), explains the difference between the sexes with respect to graduation rates (see Section 5.6).

When the type of program in which students begin their college education is taken into account, the success rate is slightly above average for those who began their studies in pre-university programs. In 1998-1999, the success rate for these students was 72.1%. Moreover, students arriving from technical programs had markedly lower success rates (52.6% in 1993-1994). Given that since 1994-1995 some graduates have also begun in Explorations programs

1. Success in pre-university programs in regular college education is measured here by the proportion of new holders of a DCS among all students in pre-university programs in regular college education who leave programs leading to a DCS, with or without a diploma. DCSs of all types are counted, whether they were obtained during or at the end of the school year in which the student was last enrolled, or the following year, if the student has not re-enrolled in a program leading to a DCS. Students are considered to have left school without a diploma when they have been absent for a period of at least two school years following the last year of enrollment.

(introduced the previous year), the success rate remained lower for pre-university program students who came from another type of program. This rate only cleared the 50% mark in 1998-1999, when it reached 53.7%.

In theory, it takes two years to obtain a DCS in a pre-university program, but very few students do so within this time frame. In fact, the rate for completion within two years (that is, the time elapsed from initial enrollment in a program leading to a DCS) reached its highest point, 41.9%, in 1998-1999 for students who began their studies in a pre-university program. This rate reached its lowest point, 35%, in 1985-1986. If all pre-university program graduates are considered, regardless of the program in which they were initially enrolled, obviously their success rate for two-year completion will be slightly lower because students who transfer from other programs spend more time in school. Generally, almost all (98%) of the pre-university DCSs are obtained within five years after the start of college studies. In 1998-1999, the success rate for these students was 70.8%.

Table 3.3

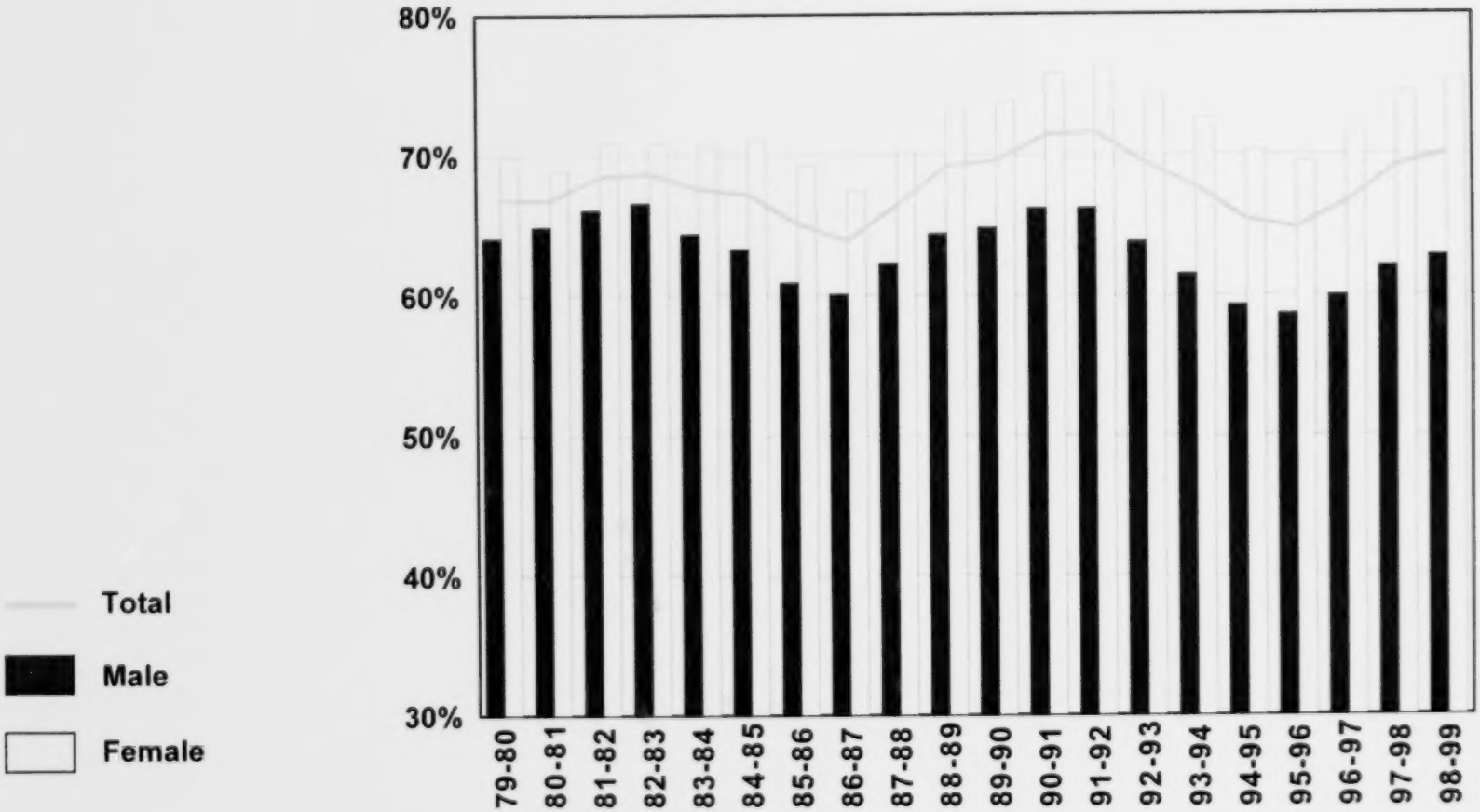
Proportion of students leaving a pre-university program with a DCS, by last year of enrollment in regular college education, gender, type of initial program, and time elapsed[1] since initial enrollment (%)

	1980-1981	1985-1986	1990-1991	1995-1996	1997-1998	1998-1999[e]
Male and female						
Same type of initial program						
2 years or less[1]	N/A	36.3	40.5	36.6	40.5	41.9
5 years or less[1]	N/A	64.3	70.8	65.3	69.8	70.8
All durations	N/A	65.3	72.0	66.6	71.4	72.1
Other type of initial program[2]						
All durations	N/A	63.8	61.3	47.5[2]	50.7[2]	53.7[2]
All types of initial programs–all durations						
Male and female	66.8	65.1	71.4	64.8	69.2	70.1
Male	64.9	60.9	66.2	58.7	62.1	62.8
Female	68.8	69.3	75.8	69.6	74.5	75.3

e: Estimates
N/A: Data not available
1. The time elapsed since initial enrollment is not necessarily the same as the duration of studies, because the studies may have been interrupted at some point.
2. Until 1993-1994, this category referred to students who began their studies in technical programs. As of 1994-1995, this category also includes students who leave pre-university education (with or without a diploma) after having begun in an Explorations program the previous year.

Graph 3.3

Proportion of students leaving a pre-university program with a DCS, by gender and last year of enrollment in regular college education (%)



3.4 Success in Technical Programs in Regular College Education[1]

Of the students in regular college education who left technical programs at the end of 1998-1999, 54.8% obtained a Diploma of College Studies (DCS). In the past 18 years, this graduation rate has fluctuated between 52.7% and 60.7%.

Of the students enrolled in technical education who left college in 1998-1999, 54.8% obtained a DCS; this figure has risen by more than 2 percentage points in the past two years.

In this area, women still do better than men, with the difference being at its highest, 17.2%, in 1997-1998. In 1998-1999, the gap narrowed by 2 percentage points; the success rate for women was 62.0% compared with 46.8% for men, for a gap of 15.2 percentage points in favour of women. This phenomenon, coupled with the fact that more women than men enroll in college (see Section 2.9), explains the difference between the sexes with respect to graduation rates (see Section 5.6).

When the type of program in which students begin their college education is taken into account, the success rate is slightly below average for those who began their studies in technical programs (53.8% in 1998-1999). Moreover, students who began in pre-university programs and who transferred to technical programs had markedly higher success rates (more than 60% until 1993-1994). Since 1994-1995, the success rates of students who began their college studies in programs other than technical programs remained higher than the average (56.7% in 1998-1999), but were brought down by the rates of students in Explorations programs (introduced in 1993-1994). Students who began elsewhere than in technical programs accounted for almost one quarter of these graduates; they accounted for more than one third of technical DCSs in 1998-1999.

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1. Success in technical programs in regular college education is measured here by the proportion of new holders of a DCS among all students in technical programs in regular college education who leave programs leading to a DCS, with or without a diploma. DCSs of all types are counted, whether they were obtained during or at the end of the school year in which the student was last enrolled, or the following year, if the student has not re-enrolled in a program leading to a DCS. Students are considered to have left school without a diploma when they have been absent for a period of at least two school years following the last year of enrollment.

In theory, it takes three years to earn a DCS in a technical program, but very few students do so within this time frame. In fact, the rates for completion within three years (that is, the time elapsed from initial enrollment in a program leading to a DCS) was 29.2% in 1998-1999 for all students who began technical programs. If all technical education graduates are considered, regardless of the program in which they were initially enrolled, obviously their success rate for three-year completion will be slightly lower because students who transfer spend more time in school. Generally, a higher proportion (85% to 90%) of technical education DCSs are obtained within five years after the start of college studies; in 1998-1999, the success rate for these students was 48.6%.

While students who began their college studies directly in technical programs can obtain their DCS more quickly, it seems that the students who come from pre-university programs are more likely to obtain their DCS if the time elapsed since the beginning of their studies is not taken into account.

Table 3.4

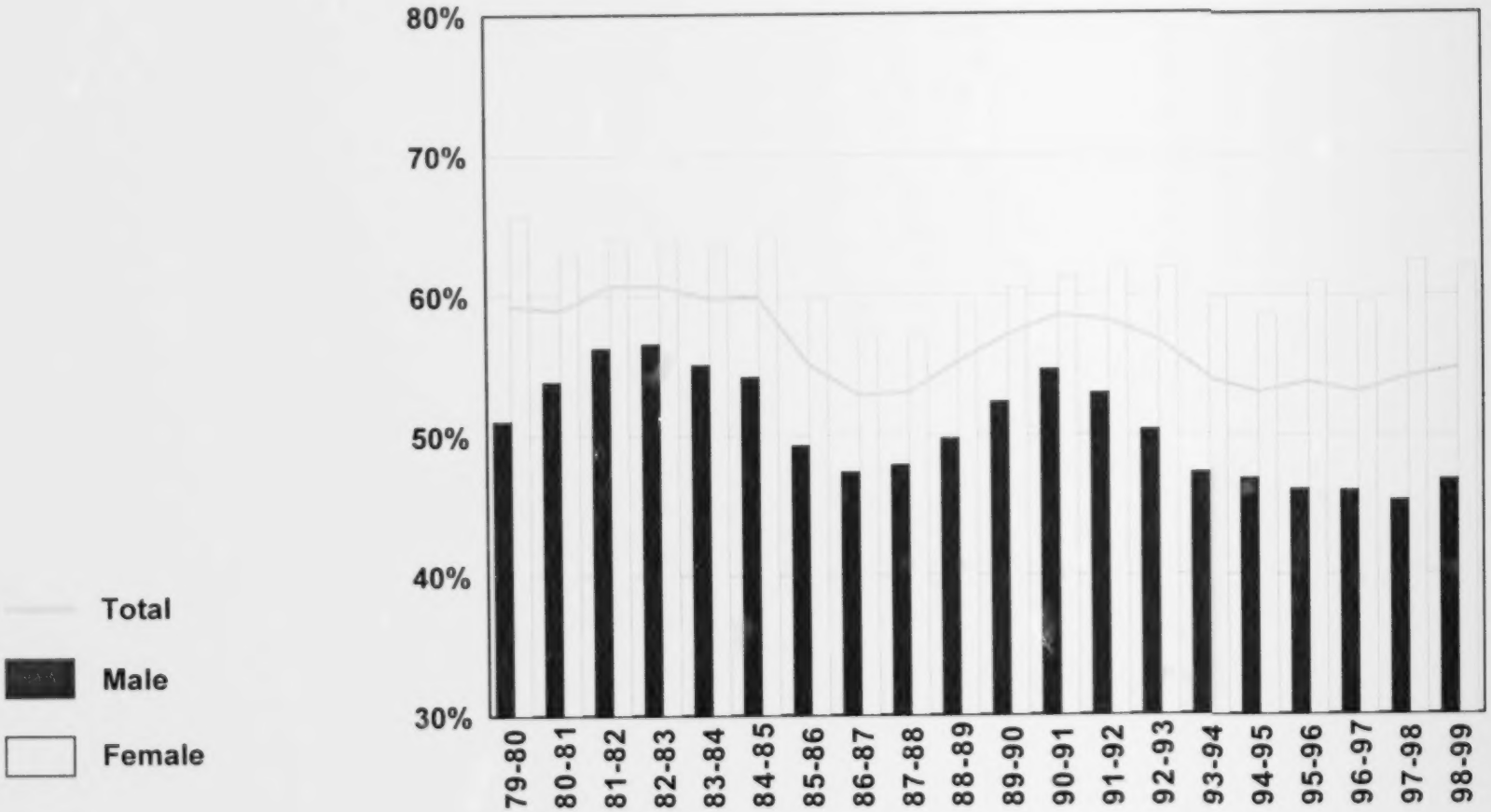
Proportion of students leaving a technical program with a DCS, by last year of enrollment in regular college education, gender, type of initial program, and time elapsed since initial enrollment[1] (%)

	1980-1981	1985-1986	1990-1991	1995-1996	1997-1998	1998-1999[e]
Male and female						
Same type of initial program						
3 years or less[1]	N/A	28.7	29.6	26.7	27.1	29.2
5 years or less[1]	N/A	50.5	51.1	47.8	48.3	48.6
All durations	N/A	53.7	56.6	53.1	53.7	53.8
Other type of initial program[2]						
All durations	N/A	61.1	64.4	55.7[2]	55.3	56.7
All types of initial programs–all durations						
Male and female	59.0	55.1	58.6	53.8	54.2	54.8
Male	53.9	49.2	54.7	46.0	45.3	46.8
Female	63.0	59.8	61.3	60.9	62.5	62.0

e: Estimates
N/A: Data not available
1. The time elapsed since initial enrollment is not necessarily the same as the duration of studies, because the studies may have been interrupted at some point.
2. Until 1993-1994, this category referred to students who began their studies in pre-university programs. As of 1994-1995, this category also includes students who left technical education (with or without a diploma) after having begun in an Explorations program the previous year.

Graph 3.4

Proportion of students leaving a technical program with a DCS, by gender and last year of enrollment in regular college education (%)



3.5 Duration of Studies in Regular College Education

The duration of studies for holders of a Diploma of College Studies (DCS) and for all students (regardless of whether or not they obtain a DCS) has changed very little over the years.[1]

On average, a DCS in pre-university education is obtained after 2.4 years equivalent to full-time study and a DCS in technical education, after 3.8 years.

Holders of a DCS who graduate from pre-university education have studied for an average of 2.4 years. For those who leave without a diploma, the total duration of studies is still an average of 1.5 years. The average duration of studies, whether students leave with or without a diploma, is 2.1 years.[2] For most students, that is, those who began their college studies directly in pre-university programs, the corresponding durations are 0.1 years or less. Students who transferred from another type of program take 3.1 years to obtain their DCS in pre-university education.

Students in technical programs take an average of 3.8 years to earn a DCS, while those who leave without a diploma do so after 2.1 years. Given the success rate (see Section 3.4), students leaving technical programs study for 3.0 years. Here too, those students who had been enrolled in technical programs right from the beginning of their college studies leave in a shorter time: those who obtained a DCS did so in 3.5 years and those leaving without a diploma did so after 1.8 years. However, students who had initially enrolled in pre-university programs (and who have a higher success rate) or in Explorations programs take 4.4 years to obtain a DCS in technical education.

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1. This is why the results of this section are the averages for college leavers for the last 5 years observed (that is, the averages for students enrolled for the last time from 1994-1995 to 1998-1999). However, in the case of students leaving without a diploma, over a 10-year period, the duration of studies before dropping out has lengthened, by 0.4 full-time terms for pre-university education and by 1 full-time term for technical education.
2. The duration of studies for all college leavers depends, on the one hand, on the respective duration of studies of students with a DCS and college leavers without a diploma, and on the other hand, on the weighting of these two categories of students, that is, the success rate. This explains why the duration of studies for all students, whether or not they leave with a diploma, has remained stable, even though the success rates have been dropping and the duration of studies for those leaving without a diploma has been getting longer.

Very slight differences in the duration of studies are apparent in the figures for men and women, and according to the status upon leaving. In pre-university education, female graduates, like women who leave their studies before obtaining a diploma, do so sooner (0.1 years) than men. This difference disappears, however, when college leavers overall are considered by gender because more women than men obtain a diploma, which raises the average duration of studies for women overall. The same effect can be observed in technical education, where female graduates study 0.2 years less than their male counterparts, while women who leave their studies before obtaining a diploma spend the same amount of time in school as men (2.1 years), with the ironic result that women overall study longer because more of them graduate.

Table 3.5

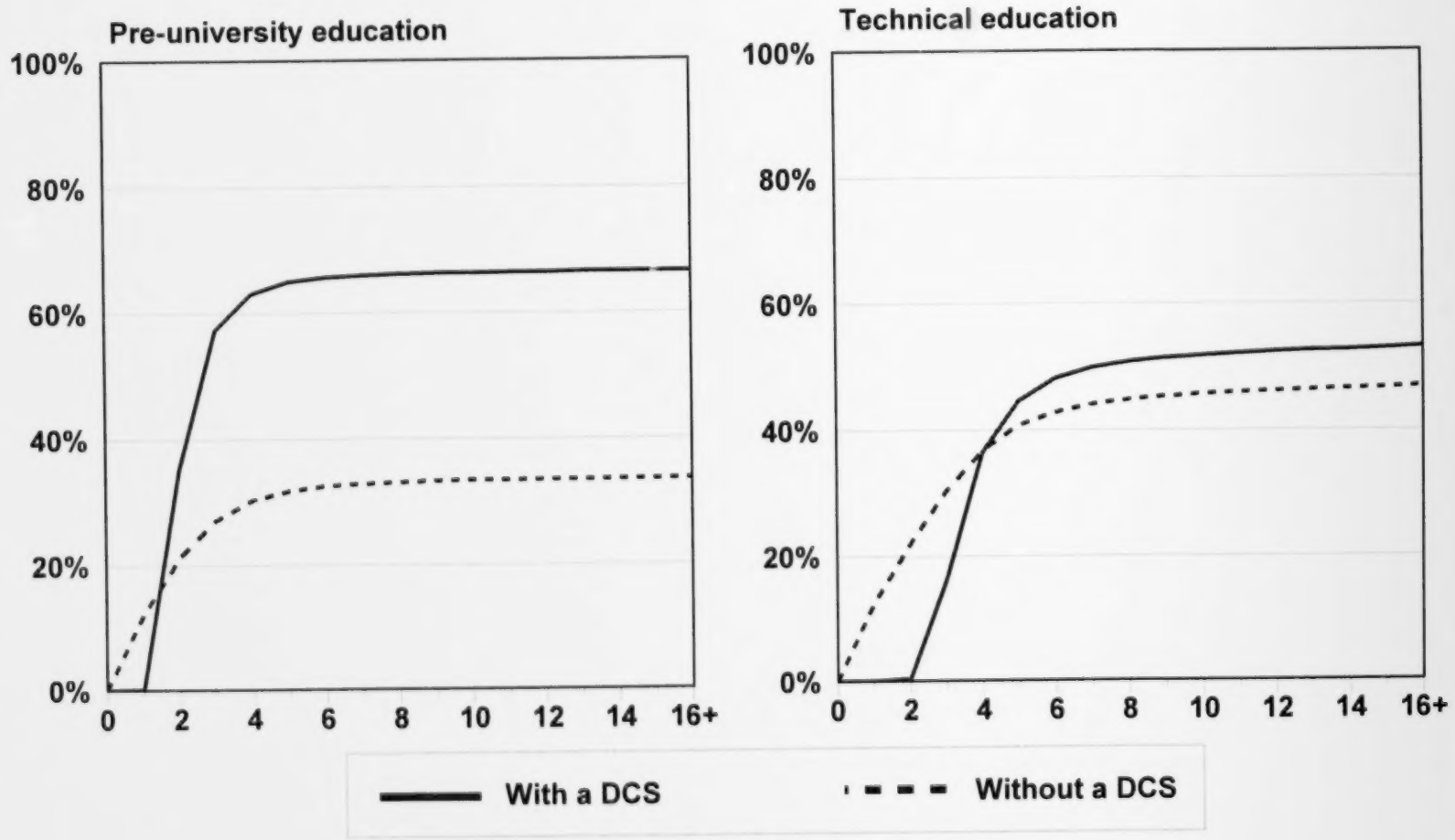
Average number of years[1] of study completed before leaving regular college education (average for all college leavers after 1994-1995), by gender and type of program enrolled in at the start and finish of the studies

	With Degree		Without Degree[2]		Total	
	Pre-university education	Technical education	Pre-university education	Technical education	Pre-university education	Technical education
Male	2.5	3.9	1.5	2.1	2.1	2.9
Female	2.3	3.7	1.4	2.1	2.1	3.1
Total[3]	**2.4**	**3.8**	**1.5**	**2.1**	**2.1**	**3.0**
Type of initial program						
Same	2.4	3.5	1.4	1.8	2.0	2.7
Different[3]	3.1	4.4	2.0	2.8	2.5	3.7

1. One year of full-time study is equivalent here to two full-time terms or eight part-time terms.
2. Refers to students who have interrupted their studies for at least six consecutive terms.
3. Refers to the total duration, including studies undertaken previously in other types of programs.

Graph 3.5

Cumulative school-leaving rates for regular college education between 1994-1995 and 1998-1999, by number of years elapsed since initial enrollment in a program leading to a DCS (%)



3.6 Success[1] and Duration of Studies in Bachelor's Programs

At the end of 1998-1999, 66.4% of students leaving bachelor's programs obtained their degree, or 0.6% fewer than the preceding year. In the 11-year period observed, the graduation rate increased; from 55.9% for students enrolled for the last time in 1987-1988, it reached an all-time high in 1998-1999.

Of 100 students enrolled in a program leading to a bachelor's degree and leaving their program at the end of 1998-1999, 66.4 obtained a degree, after an average of 6.3 full-time terms of study and an additional 2.4 part-time terms.

From the beginning of the period under observation, female students have had a higher success rate than male students, with the difference rising from 0.7 to 4.9 percentage points between 1987-1988 and 1998-1999, after a maximum gap of 7.7 percentage points in 1996-1997. In the last year observed, 68.5% of female students who left a bachelor's program did so with a degree, compared with 63.6% of their male counterparts. This phenomenon, coupled with the fact that more women than men enroll in undergraduate programs (see Section 2.11), explains the difference between the sexes with respect to graduation rates (see Section 5.7).

Graduates of bachelor's programs have studied for an average of 6.3 full-time terms, or for 8.7 terms if no consideration is given to whether they studied on a full-time or part-time basis.[2] Those who leave without a degree spend an average of 2.6 terms full-time, or slightly more than one year of study. For all students leaving bachelor's programs, the average duration of studies is 7.2 terms, 5.0 of which are full-time.

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1. Success in university programs leading to a bachelor's degree is measured here by the proportion of new holders of a bachelor's degree among all students leaving the programs with or without a degree. The degrees taken into account are bachelor's degrees obtained during or at the end of the school year in which the student was last enrolled, or the following year, if the student has not re-enrolled in an undergraduate program leading to a bachelor's degree. Students are considered to have left school without a degree when they have been absent for a period of at least two school years following the last year of enrollment.
2. A portion of the studies is done part-time and is added to the average duration of full-time studies. The duration of part-time studies is from 2.0 to 2.6 terms for graduates. For those who leave without a degree, the duration of part-time studies is from 1.6 to 2.0 terms. For all school leavers, the duration of part-time studies varies from 1.9 to 2.4 terms.

Differences in the duration of studies are apparent in the figures for men and women, and according to the status upon leaving. Whether women obtain a bachelor's degree or give up their studies without a degree, they do so sooner than men. Women who obtain a bachelor's degree spend 0.7 fewer terms in full-time studies than men, while women who leave their program without a degree do so 0.4 terms sooner than men. Nevertheless, when the duration of studies is considered, regardless of full- or part-time status, the differences between the sexes are not as pronounced, because more women than men study part-time. For all students leaving bachelor's programs, the difference between the sexes is less evident, mainly because more women than men obtain a degree, which raises the average duration of studies for women overall.

Table 3.6a

Proportion of students leaving a bachelor's program as graduates, by gender and last year of enrollment (%)

	1987-1988	1990-1991	1992-1993	1995-1996	1997-1998	1998-1999[e]
Male	55.5	59.7	58.0	61.7	62.7	63.6
Female	56.2	63.1	63.8	69.0	68.2	68.5
Total	**55.9**	**61.5**	**61.2**	**65.9**	**65.8**	**66.4**

e: Estimates

Table 3.6b

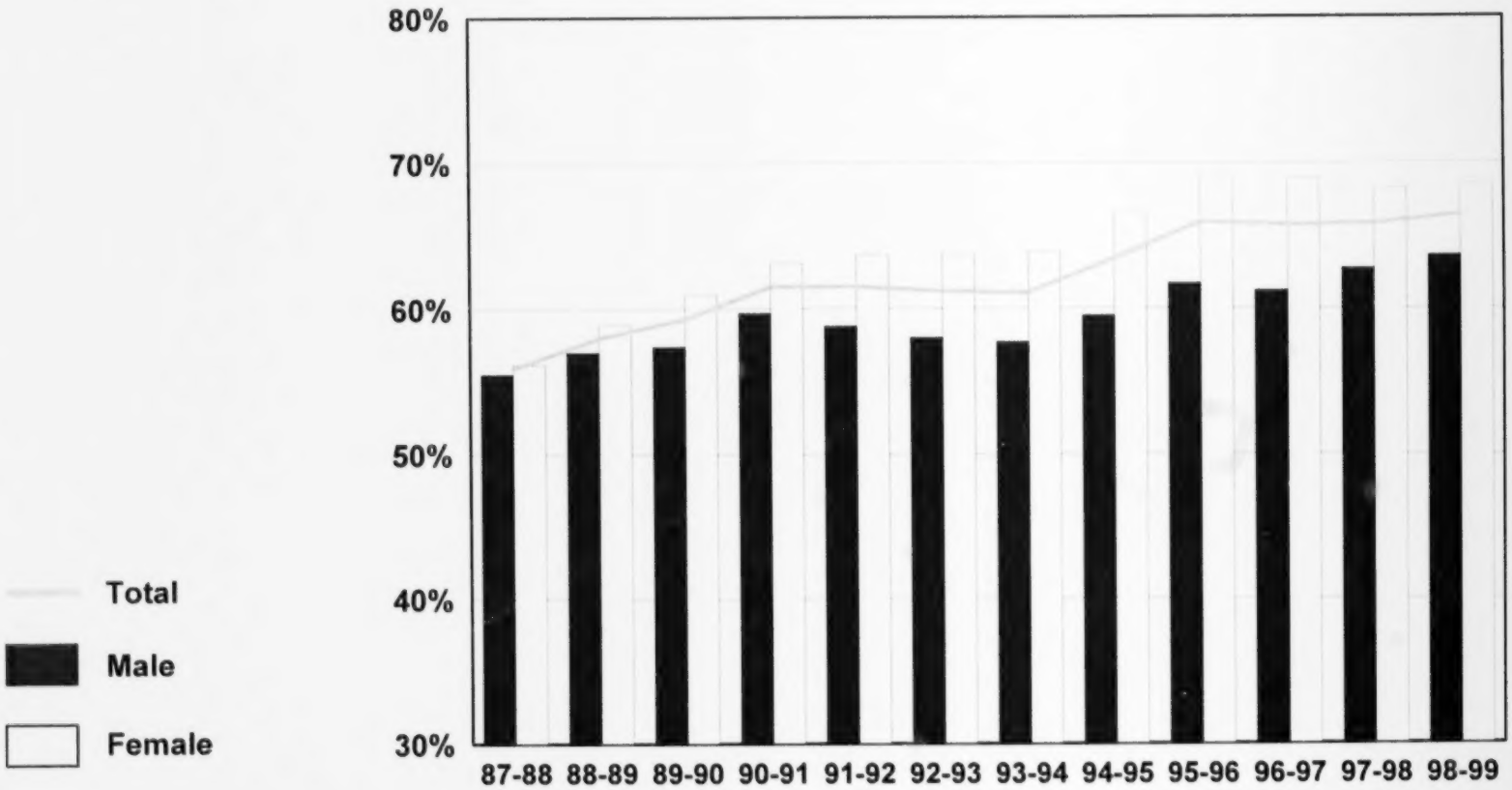
Average number of terms completed before leaving a bachelor's program (average for all leavers after 1994-1995), by gender

	With Degree		Without Degree[1]		Total	
	Full-time	All attendance statuses[2]	Full-time	All attendance statuses[2]	Full-time	All attendance statuses[2]
Male	6.7	8.9	2.8	4.5	5.2	7.2
Female	6.0	8.5	2.4	4.4	4.8	7.2
Total	**6.3**	**8.7**	**2.6**	**4.4**	**5.0**	**7.2**

1. Refers to students who have interrupted their studies for at least six consecutive terms.
2. Refers to the total duration of full- and part-time studies.

Graph 3.6

Proportion of students leaving a bachelor's program as graduates, by gender and last year of enrollment (%)



3.7 Success and Duration of Studies in Master's Programs[1]

At the end of 1998-1999, 66.7% of students leaving master's programs obtained their degree. This is a gain of 10.6 percentage points over an 11-year period, as well as the highest level recorded for that period.

Of 100 students enrolled in a program leading to a master's degree and leaving their program at the end of 1998-1999, two thirds obtained a degree, after an average of 7.7 terms of study.

In 1987-1988, relatively fewer women than men seeking a master's degree pursued their studies to graduation. Since then, women have taken the lead and now have a higher success rate than men. In 1998-1999, 67.9% of women leaving a master's program did so with a degree, for an increase of 12.9 percentage points since 1987-1988. The corresponding increase for men was 8.5 percentage points; in 1998-1999, 65.5% of men leaving a master's program did so with a degree. This phenomenon, coupled with the fact that more women than men enroll in graduate programs (see Section 2.11), explains the difference between the sexes with respect to graduation rates (see Section 5.7).

Graduates of master's programs are enrolled for an average of 7.7 terms, regardless of whether they study on a full-time or part-time basis.[2] On average, students spend 4.1 terms in full-time studies. The total average duration of studies for students who leave without a degree is 5.2 terms, whether full-time or part-time. For all students leaving master's programs, the average duration of studies is 6.9 terms, 3.4 of which are full-time. The duration of studies referred to here is the actual duration and not the standardized duration used to calculate full-time equivalents (FTEs) for funding purposes, where a standardized duration is generally recognized for a master's program with a thesis. In these cases, the "funded" duration is a maximum of 4 terms (1.5 years in FTEs) for master's programs. However, the

1. Success in university programs leading to a master's degree is measured here by the proportion of new holders of a master's degree among all students leaving the programs with or without a degree. The degrees taken into account are master's degrees obtained during or at the end of the school year in which the student was last enrolled, or the following year, if the student has not re-enrolled in a graduate program leading to a master's degree. Students are considered to have left school without a degree when they have been absent for a period of at least two school years following the last year of enrollment.
2. A portion of the studies is done part-time and is added to the average duration of full-time studies. The duration of part-time studies is from 3.4 to 4.3 terms for graduates. For those who leave without a degree, the duration of part-time studies is from 2.7 to 3.4 terms. For all school leavers, the duration of part-time studies varies from 3.3 to 3.9 terms.

actual duration of studies exceeds this standard for all types of status. This means that students who leave without a master's degree are in practice fully funded, with the exception of a supplementary amount of $600 that is allocated to universities when the degree is awarded.

Differences in the duration of studies are apparent in the figures for men and women, and according to the status upon leaving. Contrary to what was observed at the college level and in bachelor's programs, women enrolled in master's programs do not take less time than men to obtain their degree. If full-time enrollment only is considered, women certainly leave sooner (with or without a diploma) than men, but women with a master's degree have studied part-time for 0.4 terms more than men, and women who leave without a master's degree were enrolled part-time for 3.4 terms, compared with 2.9 terms for their male counterparts. For all students leaving master's programs, the difference between the sexes is a fairly adequate reflection of what was revealed for students leaving with a degree and students leaving without a degree; the figures for the two types of status are similar for both sexes.

Table 3.7a

Proportion of students leaving a master's program as graduates, by gender and last year of enrollment (%)

	1987-1988	1990-1991	1992-1993	1995-1996	1997-1998	1998-1999[e]
Male	57.0	64.4	64.3	63.7	64.5	65.5
Female	55.0	64.5	65.9	67.5	68.1	67.9
Total	**56.1**	**64.5**	**65.1**	**65.6**	**66.3**	**66.7**

e: Estimates

Table 3.7b

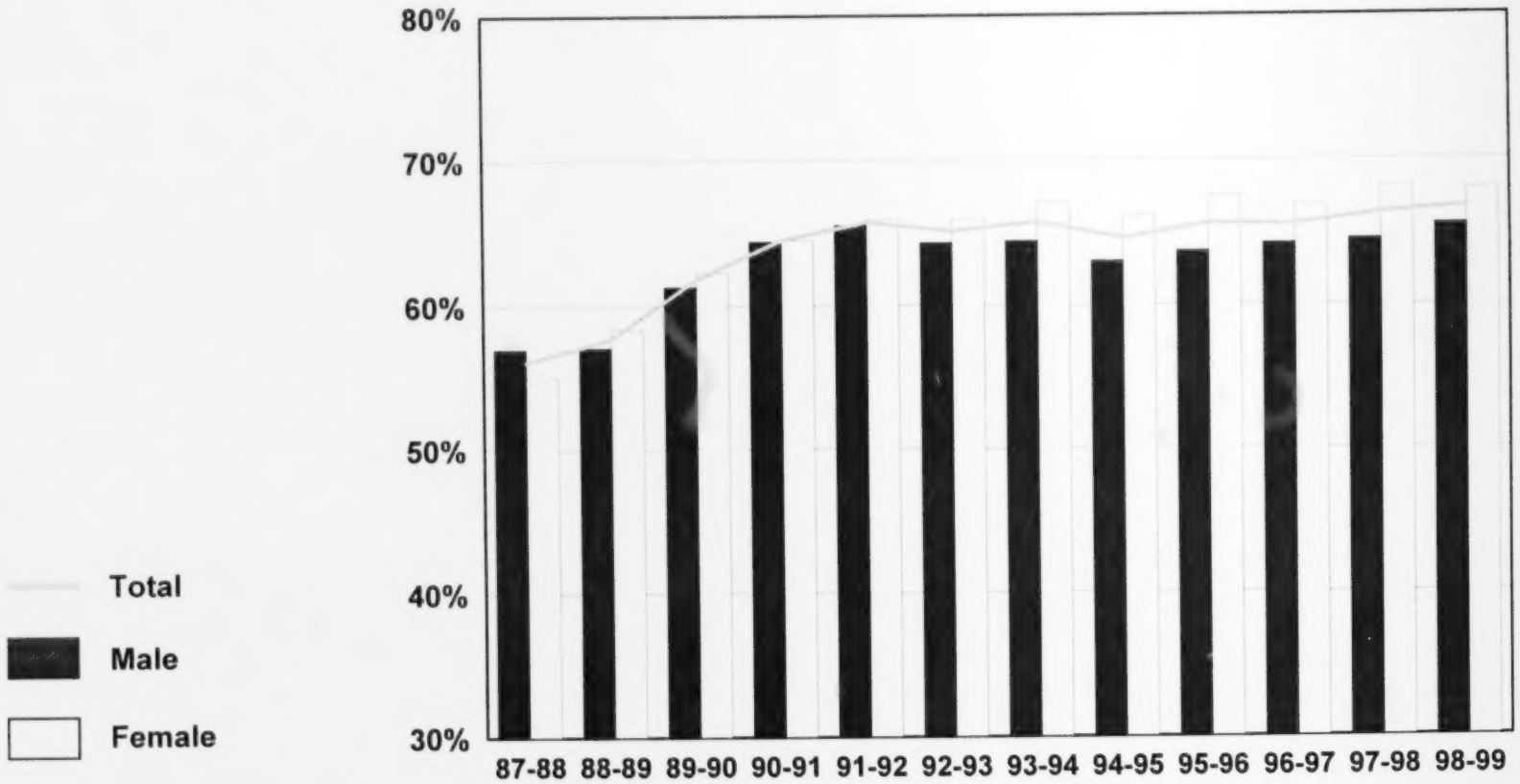
Average number of terms completed before leaving a master's program (average for all leavers after 1994-1995), by gender

	With Degree		Without Degree[1]		Total	
	Full-time	All attendance statuses[2]	Full-time	All attendance statuses[2]	Full-time	All attendance statuses[2]
Male	4.2	7.7	2.2	5.2	3.5	6.8
Female	3.9	7.8	1.9	5.3	3.3	7.0
Total	**4.1**	**7.7**	**2.1**	**5.2**	**3.4**	**6.9**

1. Refers to students who have interrupted their studies for at least six consecutive terms.
2. Refers to the total duration of full- and part-time studies.

Graph 3.7

Proportion of students leaving a master's program as graduates, by gender and last year of enrollment (%)



3.8 Success and Duration of Studies in Doctoral Programs[1]

At the end of 1997-1998, 53.4% of students leaving doctoral programs obtained their degree, an increase of 4.7 percentage points over 1987-1988.

Of students enrolled in a doctoral program and leaving their program at the end of 1998-1999, 53.4% obtained a degree after an average of 15.5 terms.

There are still fewer women than men with doctorates. Of the women enrolled in 1998-1999 who left doctoral programs, 49.2% obtained their degree, for an increase of 8.9 percentage points compared with 11 years earlier. For men, the graduation rate increased by 3.3 percentage points in the same period and the proportion of male candidates who completed their studies in 1998-1999 with a degree was 56.4%, or 7.2 percentage points more than for female candidates. This phenomenon, coupled with the fact that more women than men enroll in doctoral programs (see Section 2.11), explains the difference between the sexes with respect to graduation rates (see Section 5.7).

Graduates of doctoral programs are enrolled for an average of 15.5 terms, regardless of whether they study on a full-time or part-time basis.[2] On average, students spend 11.3 terms in full-time studies. Those who leave without a degree study for 8.9 terms, whether full-time or part-time. For students overall, whether they leave a doctoral program with or without a degree, they do so after 12.5 terms, of which 8.8 are full-time. The duration of studies referred to here is the actual duration and not the standardized duration used to calculate full-time equivalents (FTEs) for funding purposes, where only one standardized duration is recognized. In most cases, the "funded" duration is a maximum of 8 terms (3 years in FTEs) for doctoral programs. However, the actual duration of studies exceeds this standard for all types of

1. Success in university programs leading to a doctorate is measured here by the proportion of new holders of a doctorate among all students leaving the programs with or without a degree. The degrees taken into account are doctorates obtained during or at the end of the school year in which the student was last enrolled, or the following year, when the student has not re-enrolled in a postgraduate program leading to a doctorate. Students are considered to have left school without a degree when they have been absent for a period of at least two school years following the last year of enrollment.
2. A portion of the studies is done part-time and is added to the average duration of full-time studies. The duration of part-time studies is from 3.3 to 5.9 terms for holders of a doctorate. For those who leave without a degree, the duration of part-time studies is from 2.4 to 4.2 terms. For all school leavers, the duration of part-time studies varies from 3.0 to 4.9 terms.

status. This means that students who leave without a doctorate are in practice fully funded, with the exception of a supplementary amount of $1 000 that is allocated to universities when the degree is awarded.

Differences in the duration of studies are apparent in the figures for men and women, and according to the status upon leaving. Contrary to women at the college and undergraduate levels, women enrolled in doctoral programs do not take less time than men to obtain their degree or to give up their studies. If full-time enrollment only is considered, women leave sooner (with or without a diploma) than men, but women with doctorates have studied part-time for 1.6 terms more than men, and women who leave without a degree were enrolled part-time for 3.5 terms, compared with 2.8 terms for their male counterparts. For all students leaving doctoral programs, the difference between the sexes is less evident, mainly because more men than women obtain a degree, which raises the average duration of studies for men overall.

Table 3.8a

Proportion of students leaving a doctoral program as graduates, by gender and last year of enrollment (%)

	1987-1988	1990-1991	1992-1993	1995-1996	1997-1998	1998-1999[e]
Male	53.1	55.5	55.0	60.9	57.3	56.4
Female	40.3	46.9	51.9	48.9	49.0	49.2
Total	**48.7**	**52.4**	**53.9**	**56.5**	**54.2**	**53.4**

e: Estimates

Table 3.8b

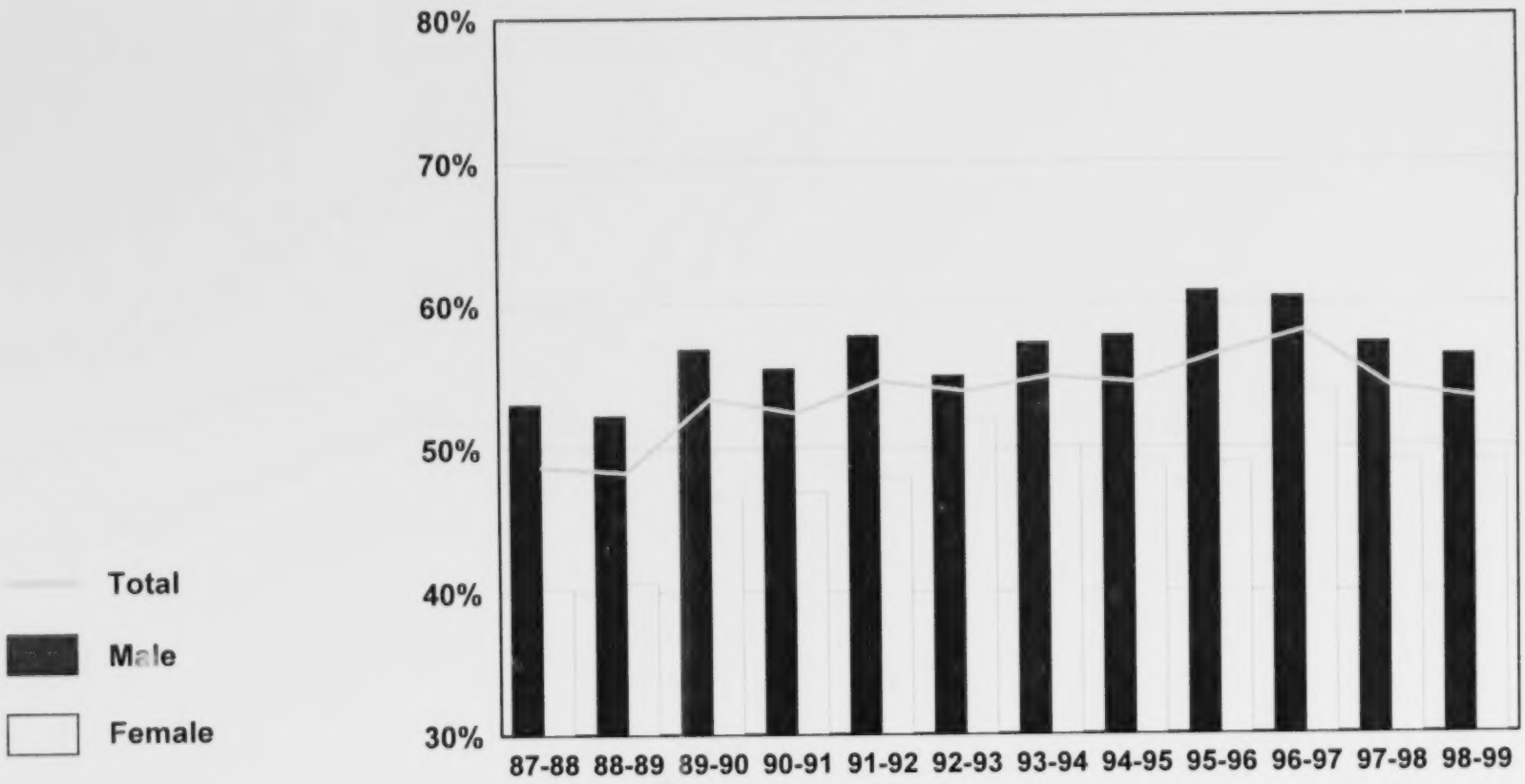
Average number of terms completed before leaving a doctoral program (average for all leavers after 1994-1995), by gender

	With Degree		Without Degree[1]		Total	
	Full-time	All attendance statuses[2]	Full-time	All attendance statuses[2]	Full-time	All attendance statuses[2]
Male	11.4	15.1	6.1	8.9	9.2	12.5
Female	11.1	16.4	5.3	8.8	8.1	12.5
Total	**11.3**	**15.5**	**5.8**	**8.9**	**8.8**	**12.5**

1. Refers to students who have interrupted their studies for at least six consecutive terms.
2. Refers to the total duration of full- and part-time studies.

Graph 3.8

Proportion of students leaving a doctoral program as graduates, by gender and last year of enrollment (%)



4.1 Secondary School Examination Results, by Several Variables–Youth Sector

The Ministère de l'Éducation administers uniform examinations to students in Secondary IV and V for purposes of certification. The average result for the June 2000 examinations was 75.4%.[1] The success rate was 88.9%.

The success rate for the Ministère's June 2000 secondary school uniform examinations was 88.9%. Overall, female students obtained only slightly higher marks than male students.

While female students have a much better record than male students for staying in school, they have no clear advantage over male students with regard to the results obtained on uniform examinations. This may be because of the higher dropout rate among male students, for it is usually the weaker students who leave school before graduation.

The average mark obtained by students in private schools was 8.3 percentage points higher than the average mark obtained in the public system. The success rate was 87.3% in the public system, compared with 96.6% in the private system. One of the factors likely to explain these differences is that private schools can impose selection criteria for admitting students.

Students who received instruction in French obtained better results on the examinations than students who studied in English. The average mark of students studying in French was 5.2% higher than that of students studying in English; the success rate of students studying in French was 7.6 percentage points higher than that of students studying in English.

The best results were obtained in the second language; the lowest results were obtained in history and language of instruction.

1. This figure is calculated on the basis of the students' final marks. The final mark is made up, in equal proportions, of the student's result on the uniform examination and the "moderated" school mark. "Moderation" is a procedure which renders the marks assigned by different schools comparable by using the results of the uniform examination for each student group as the basis of comparison.

Female students outperformed male students in French, language of instruction, English, language of instruction, French, second language, and Physical Science 416. In the other subjects, there was little difference.

Table 4.1

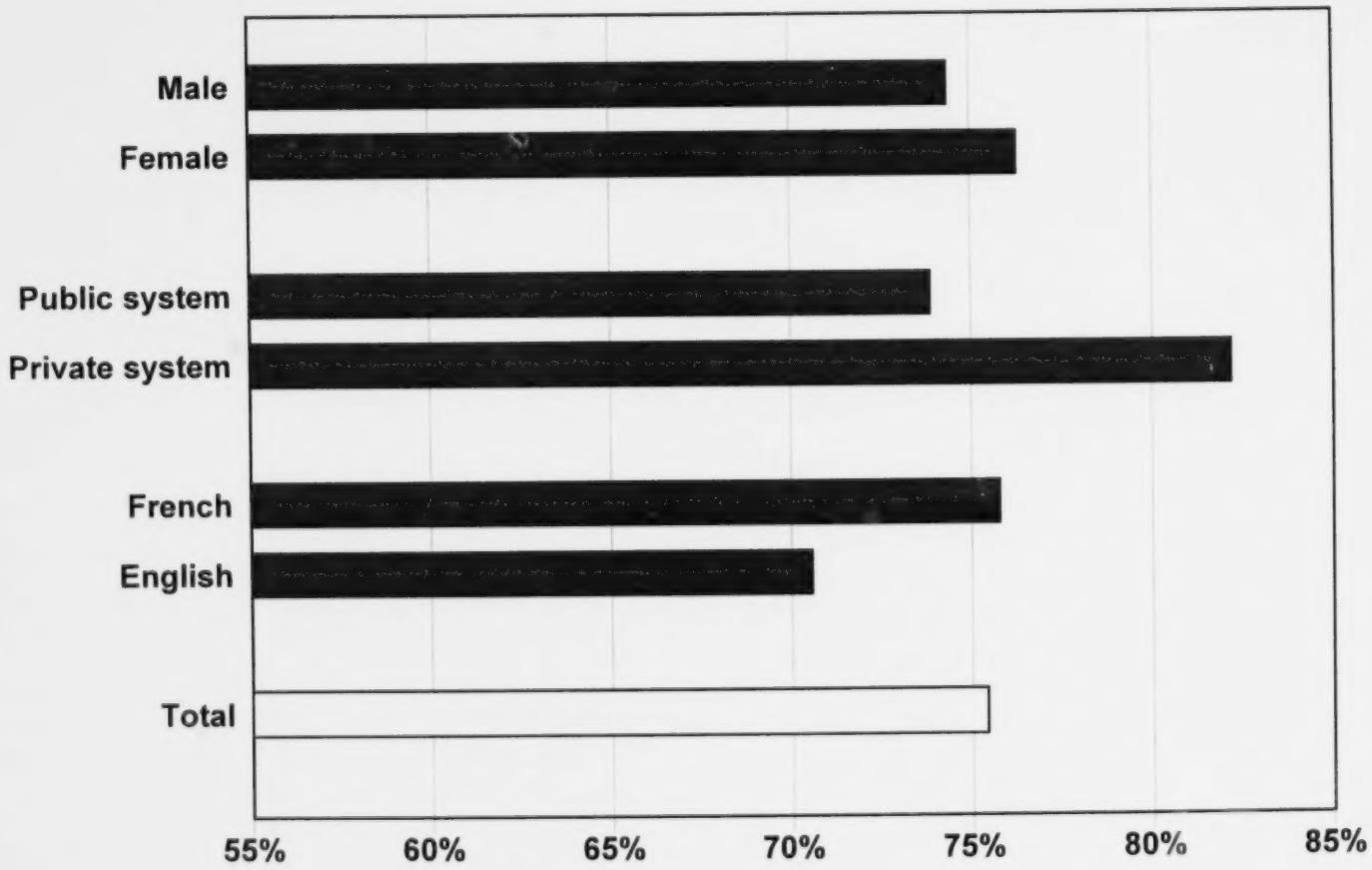
Results on secondary school uniform examinations in the youth sector, by gender, school system, language of instruction and subject: June 2000 (%)

	Average	Success Rate
Male	74.4	88.1
Female	76.3	89.6
Public system[1]	73.9	87.3
Private system	82.2	96.6
Language of instruction: French	75.8	89.6
Language of instruction: English	70.6	82.0
English, language of instruction (Secondary V)	72.5	94.8
English, second language (Secondary V)	78.4	91.2
English, second language (Secondary V)	81.8	96.3
French, language of instruction (Secondary V)	73.6	92.7
French, second language (Secondary V)	76.9	92.8
History (Secondary IV)	70.7	80.6
Physical Science 416 (Secondary IV)	74.1	85.8
Total	**75.4**	**88.9**

1. Excludes the Cree School Board, the Kativik School Board and institutions outside the jurisdiction of the Ministère de l'Éducation.

Graph 4.1

Results on secondary school uniform examinations in the youth sector, by gender, school system and language of instruction: June 2000 (%)



4.2 Regional Disparities in Secondary School Examination Results–Youth Sector

Six administrative regions recorded higher averages and success rates than the overall provincial results on the Ministère de l'Éducation's June 2000 uniform examinations.[1] These regions are Mauricie, Capitale-Nationale, Chaudière-Appalaches, Lanaudière, Estrie and Montérégie. Ranked among the lowest were Bas-Saint-Laurent, Saguenay–Lac-Saint-Jean, Côte-Nord and Nord-du-Québec.

The results on the Ministère's June 2000 uniform examinations showed a difference of 15.4 percentage points between the success rates of students in the region with the best performance (92.7%) and that of students in the region with the poorest performance (77.3%).

Regional disparities increased sharply between 1999 and 2000. The difference between the highest and lowest averages went from 6.3 to 9.3 percentage points, whereas the gap in the success rates went from 10.7 to 15.4 percentage points. These new disparities are the largest observed since 1989.

The results on uniform examinations are not necessarily indicative of the probability of obtaining a secondary school diploma. In some regions, it is possible that a low student retention rate contributes to higher marks on the uniform examinations because the weakest students have dropped out.

1. Results are calculated on the basis of the students' final marks. The final mark is made up, in equal proportions, of the student's result on the uniform examination and the "moderated" school mark. "Moderation" is a procedure which renders the marks assigned by different schools comparable by using the results of the uniform examination for each student group as the basis of comparison.

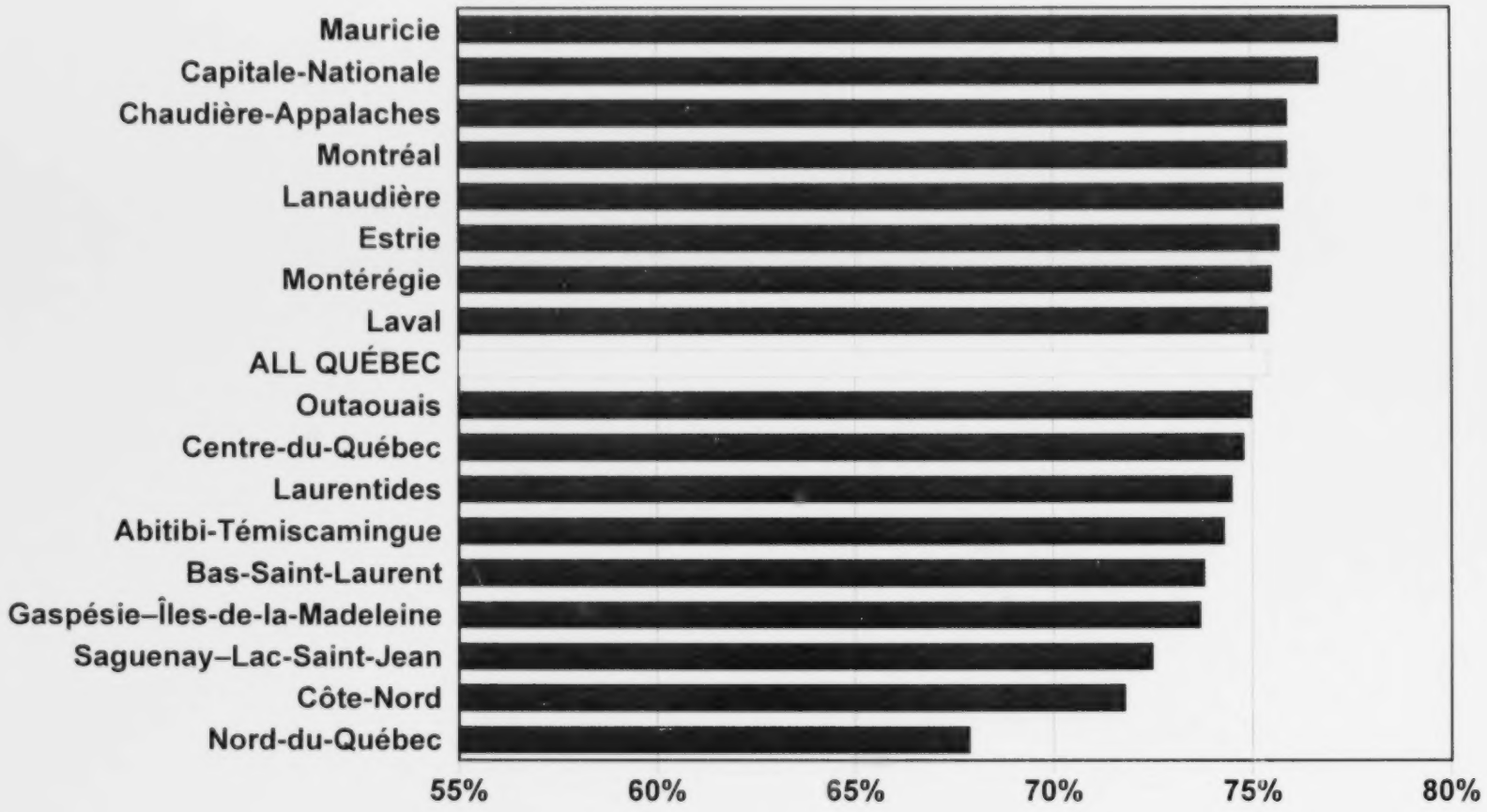
Table 4.2

Results on secondary school uniform examinations in the youth sector, by school administrative region: June 2000 (%)

School Administrative Region	Average	Success Rate
Gaspésie–Îles-de-la-Madeleine	73.7	88.0
Bas-Saint-Laurent	73.8	87.2
Saguenay–Lac-Saint-Jean	72.5	86.2
Capitale-Nationale	76.7	91.2
Chaudière-Appalaches	75.9	90.6
Mauricie	77.2	92.7
Centre-du-Québec	74.8	88.4
Estrie	75.7	90.0
Montérégie	75.5	89.2
Montréal	75.9	88.3
Laval	75.4	88.5
Lanaudière	75.8	89.6
Laurentides	74.5	88.0
Outaouais	75.0	87.4
Abitibi-Témiscamingue	74.3	89.0
Côte-Nord	71.8	83.7
Nord-du-Québec	67.9	77.3
Total	**75.4**	**88.9**

Graph 4.2

Average results on secondary school examinations in the youth sector, by school administrative region: June 2000 (%)



4.3 Secondary V French, Language of Instruction, Examination–Youth Sector

Students who wrote the June 2000 Secondary V French, language of instruction, examination obtained an average mark of 73.6%. The success rate was 92.7%.[1]

The success rate on the Ministère's June 2000 Secondary V French, language of instruction, examination was 92.7%. Female students obtained significantly higher marks than male students, particularly in written production.

The examination consisted of three components: written production, a reading comprehension exercise and an oral expression test. The reading comprehension and oral expression components were under the responsibility of the educational institutions. The results obtained in these sections are not included in Table 4.3. However, they were considered in the calculation of the overall results on the French examination. In written production, which was under the responsibility of the Ministère de l'Éducation, students obtained an average of 77.0% and a success rate of 90.4%.

Whereas there was no significant difference overall between the results obtained by male and female students on the examinations used for purposes of certification (see Section 4.1), female students outperformed male students on the French examination. The average for female students was 6.2 percentage points above that for male students, and the success rate was 7.2 percentage points in favour of female students. In written production, the female students' average was 6.5 percentage points higher than the male students' and their success rate was 8.1 percentage points higher.

The average obtained by private school students surpassed that of public school students by 5.8 percentage points. In the public system, 8.4% of the students failed the ministry examination, compared with 2.5% in the private system. In written production, students in private schools scored higher than students in the public system.

1. Results are calculated on the basis of the students' final marks. The final mark is made up, in equal proportions, of the student's result on the uniform examination and the "moderated" school mark. "Moderation" is a procedure which renders the marks assigned by different schools comparable by using the results of the uniform examination for each student group as the basis of comparison.

Table 4.3

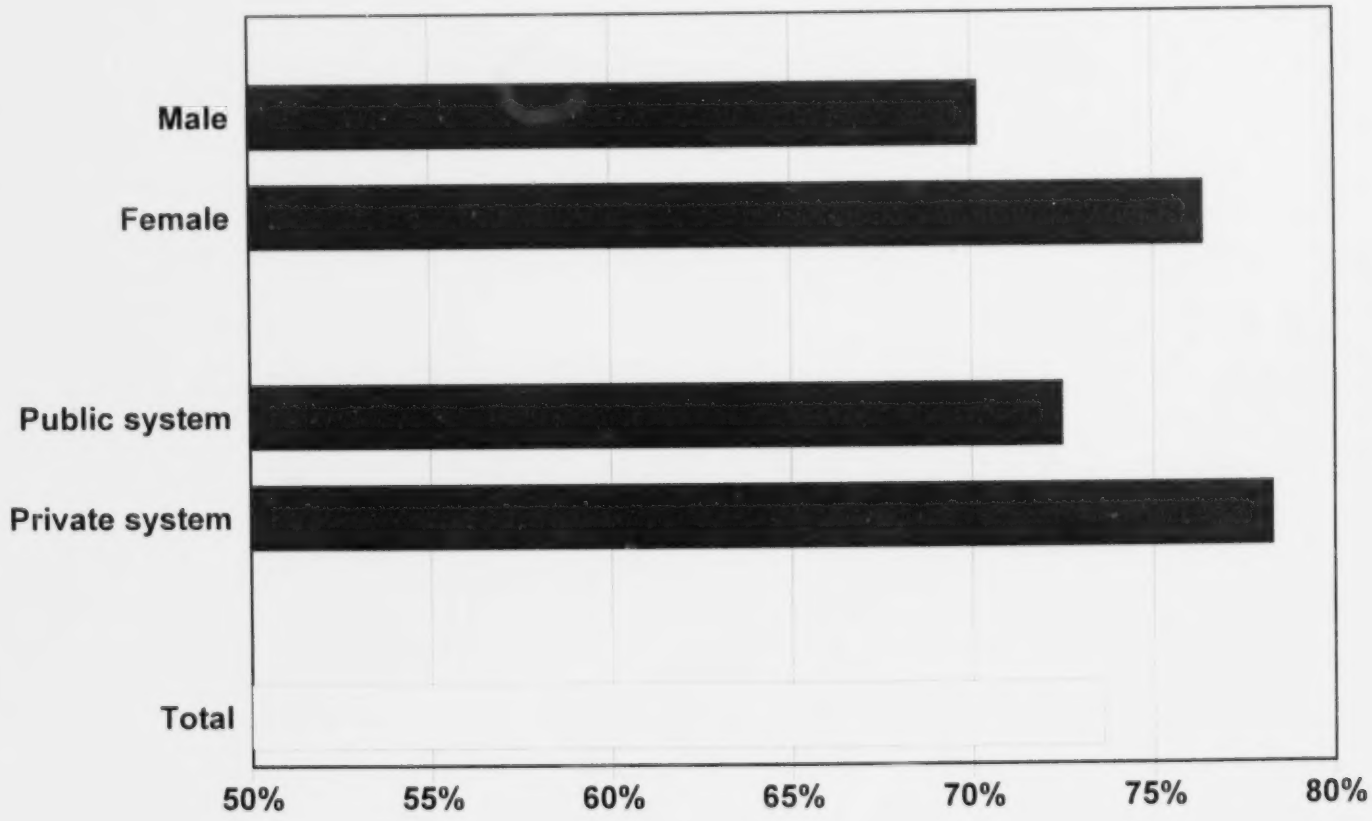
Results on the Secondary V French, language of instruction, examination in the youth sector, by gender and school system: June 2000 (%)

	Written Production		Overall Results	
	Average	Success Rate	Average	Success Rate
Male	73.5	86.0	70.2	88.8
Female	80.0	94.1	76.4	96.0
Public system[1]	76.1	89.5	72.5	91.6
Private system	81.2	94.4	78.3	97.5
Total	**77.0**	**90.4**	**73.6**	**92.7**

1. Excludes the Cree School Board, the Kativik School Board and institutions outside the jurisdiction of the Ministère de l'Éducation.

Graph 4.3

Average results on the Secondary V French, language of instruction, examination in the youth sector, by gender and school system: June 2000 (%)



4.4 Mathematics Achievement Among Secondary II Students: An International Comparison

In 1999, Québec students in the eighth grade, that is, Secondary II, participated in the Third International Mathematics and Science Study–Repeat (TIMSS–R). Québec students obtained better results than the international average.

Secondary II students in Québec ranked third among 13 OECD countries on a mathematics test in 1999. Québec's average was 5 percentage points higher than that of Ontario.

A total of 38 countries participated in the study, including 13 member countries of the Organisation for Economic Co-operation and Development (OECD). Table 4.4 contains the results achieved by Québec, the OECD countries represented, and the Canadian provinces that broadened their sample in order to allow for interprovincial comparisons. Of the OECD countries, only Korea and Japan obtained slightly better results than Québec, whose results were comparable to those of the Belgian Flemish community, but better than those of all other OECD countries.

The results of Québec students can be compared with those of students in four other Canadian provinces: Newfoundland, Ontario, Alberta and British Columbia. As in 1995, Québec obtained better results than any of these provinces. The results for these provinces varied from 50% in Newfoundland to 53% in Alberta.

The mathematics test was divided into five sections: fractions and number sense, algebra, geometry, measurement, and data representation, analysis and probability. For each of these sections, Québec students obtained significantly better results that the Canadian and international averages.

A TIMSS–R questionnaire was designed to measure students' enjoyment of mathematics. The answers to one of the five questions made it possible to establish the percentage of students who enjoy learning math.

Surprisingly, only 47% of Québec students who received excellent results on the test said they enjoyed learning mathematics. A similar phenomenon was observed in Japan (48%) and Korea (54%).

Graph 4.4 correlates the results obtained on the mathematics test with the students' level of enjoyment,[1] for those countries participating in the study.

1. The students' "level of enjoyment" corresponds to the percentage of students who said that they "agree" or "strongly agree" with the following statement: "I enjoy learning mathematics."

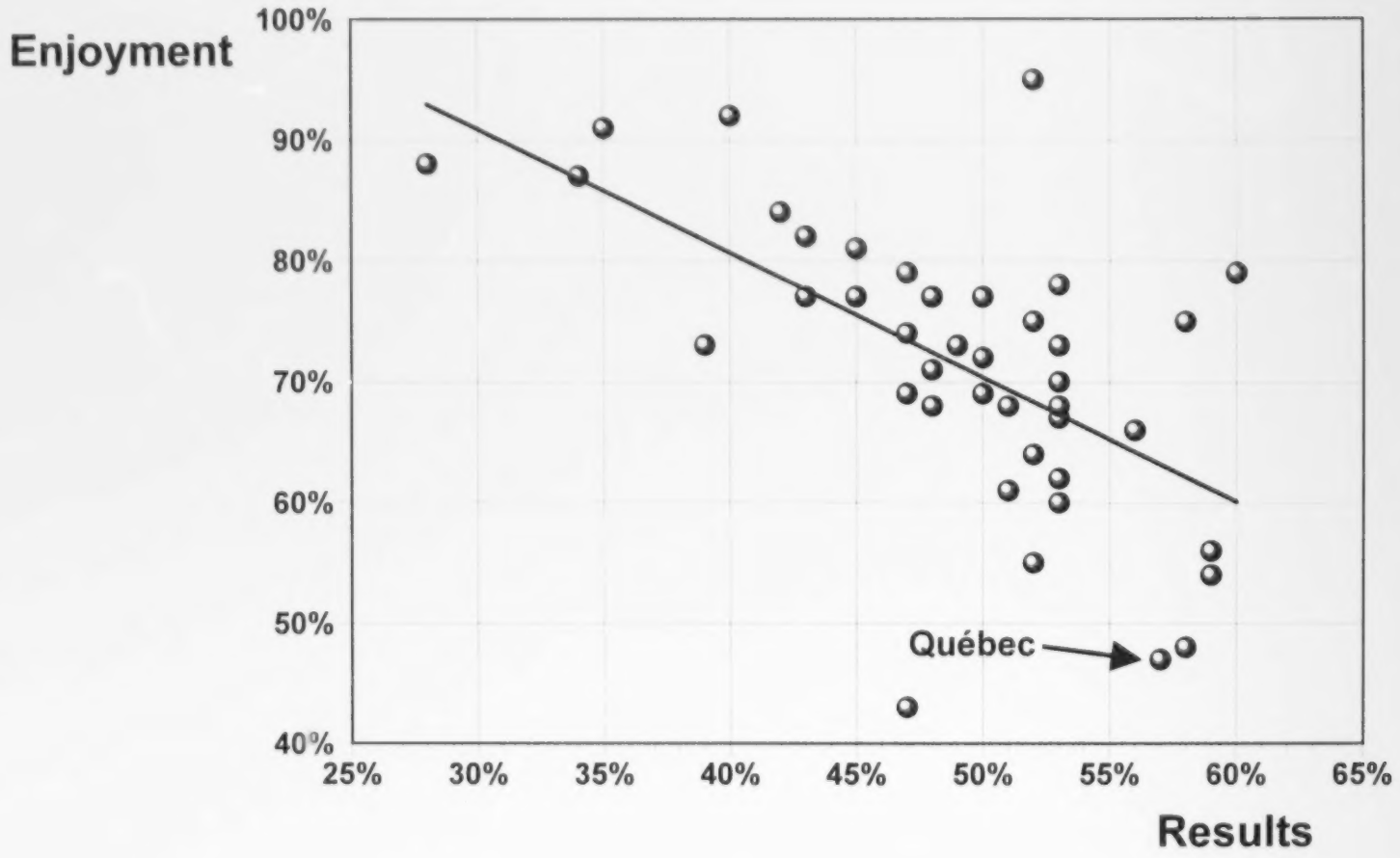
Table 4.4

Results of eighth-grade students on an international mathematics test in 1999: average (%) and average age of participants

	Average	Standard deviation	Average age
Korea	58.7	0.20	14.4
Japan	57.9	0.17	14.4
Québec	**56.6**	**0.53**	**14.3**
Belgium (Flemish)	55.8	0.33	14.1
Netherlands	54.0	0.71	14.2
Hungary	53.2	0.37	14.4
Canada (including Québec)	**53.1**	**0.25**	**14.0**
Alberta	**53.0**	**0.42**	**13.9**
Australia	52.5	0.48	14.3
British Columbia	**52.2**	**0.56**	**13.9**
Finland	52.0	0.27	13.8
Czech Republic	52.0	0.42	14.4
Ontario	**51.7**	**0.30**	**13.9**
Newfoundland	**50.4**	**0.61**	**14.0**
United States	50.2	0.40	14.2
England	49.6	0.41	14.2
New Zealand	49.1	0.52	14.0
Italy	47.9	0.38	14.0
Turkey	42.9	0.43	14.2
International average (38 countries)	**48.7**	**0.07**	**14.4**

Graph 4.4

Correlation between students' results on the mathematics test and their level of enjoyment (%)



4.5 Science Achievement Among Secondary II Students: An International Comparison

In 1999, Québec students in the eighth grade, that is, Secondary II, participated in the Third International Mathematics and Science Study–Repeat (TIMSS–R). Québec students obtained better results that the international average in the six science components.

Secondary II students in Québec ranked sixth among 14 OECD countries on a science test in 1999. Québec's average was similar to that of Canada as a whole.

A total of 38 countries participated in the study, including 14 member countries of the Organisation for Economic Co-operation and Development (OECD). Table 4.5 contains the results achieved by Québec, the OECD countries represented, and the Canadian provinces that broadened their sample in order to allow for interprovincial comparisons. Québec's results were lower than those of Hungary, Japan, Korea, the Netherlands and Australia, but comparable to those of the Czech Republic, England, Finland, the Belgian Flemish community and Canada as a whole, and better than those of the United States, New Zealand, Italy and Turkey.

The results of Québec students (54.0%) can be compared with those of students in four other Canadian provinces: Newfoundland, Ontario, Alberta and British Columbia. As in 1995, Québec students did not do as well as those from Alberta (56.1%). Québec students obtained an average equivalent to that of British Columbia (54.2%) and a little higher than that of Canada as a whole (53.3%). Québec did better than Ontario (51.8%) and Newfoundland (51.2%).

The science test was divided into six sections: earth science; life science; physics; chemistry; environmental and research issues; and scientific inquiry and the nature of science. Québec students obtained very good results in earth science, physics, chemistry, and environmental and research issues, but experienced more difficulty with life science and scientific inquiry and the nature of science.

In all countries participating in the study, male students did slightly better than female students. In Québec, the very slight disparity observed in favour of male students was not significant.

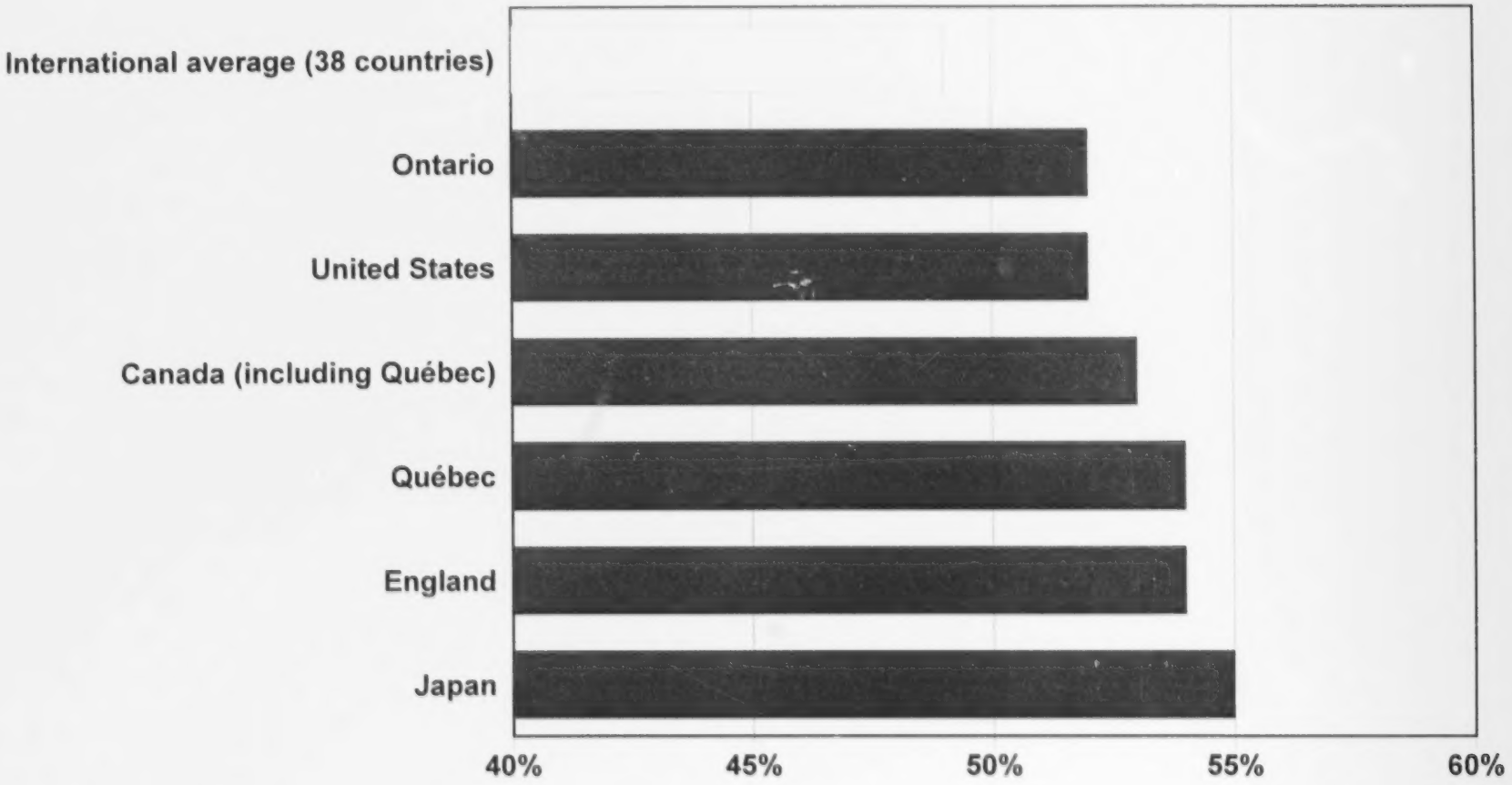
Table 4.5

Results of eighth-grade students on an international science test in 1999: average (%) and average age of participants

	Average	Standard deviation	Average age
Alberta	**56.1**	**0.47**	**13.9**
Hungary	55.2	0.37	14.4
Japan	55.0	0.22	14.4
Korea	54.9	0.26	14.4
Netherlands	54.5	0.69	14.2
British Columbia	**54.2**	**0.48**	**13.9**
Australia	54.0	0.44	14.3
Québec	**54.0**	**0.48**	**14.3**
Czech Republic	53.9	0.42	14.4
England	53.8	0.48	14.2
Finland	53.5	0.35	13.8
Belgium (Flemish)	53.5	0.31	14.1
Canada (including Québec)	**53.3**	**0.21**	**14.0**
Ontario	**51.8**	**0.31**	**13.9**
United States	51.5	0.46	14.2
Newfoundland	**51.2**	**0.56**	**14.0**
New Zealand	51.0	0.49	14.0
Italy	49.3	0.39	14.0
Turkey	43.3	0.43	14.2
International average (38 countries)	**48.8**	**0.07**	**14.4**

Graph 4.5

Average performance of secondary school students on an international science test: Québec, Ontario and certain OECD countries, 1999 (%)



4.6 Ministerial Examination of College French

In 1999-2000, 39 980 college students wrote the ministerial examination of college French, language of instruction and literature.

In 1999-2000, the success rate on the ministerial examination of college French was 88.1%.

Since January 1, 1998,[1] students in French CEGEPs must pass this examination in order to obtain a Diplôme d'études collégiales (DEC-Diploma of College Studies) and be admitted to university. The students must read a series of texts and write an essay on one of them, thereby demonstrating their ability to understand a variety of texts and produce a structured essay using correct language.

There are three major evaluation criteria: I-*Comprehension and insight;* II-*Organization of response;* and III-*Expression*. The first two criteria contain specific subcriteria that are evaluated using a seven-level rating scale: A (very good), B (good), C+ (fair), C (adequate), D (weak), E (very poor) and F (unacceptable). In the *Expression* criterion, the "appropriate use of words" subcriterion is evaluated using the same rating scale, while sentence structure, punctuation, spelling and grammar are evaluated quantitatively, by counting errors. Students must obtain a C or better for each of the three major criteria. A grade of C represents an adequate level of competence. Therefore, students who obtain a D or worse on any one of the three criteria automatically fail the examination.

The results were much better for *Organization of response*, on which 55.4% of students obtained an A. Good results were also obtained for *Comprehension and insight*, on which 58.2% of students obtained a B and 12.2%, an A. The results for the third criterion, *Expression*, were not as good, with 71.9% of students earning a B or a C. In addition, 10.3% of students failed this criterion and, consequently, the examination. The success rate for the examination was 88.1%, which has remained relatively stable since 1997-1998.

The success rate for women was 90.7%, compared to 84.4% for men.

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1. This requirement has been postponed until January 1, 2003, for students who have passed at least one language and literature course in the old system.

Students enrolled in pre-university programs leading to a DEC recorded a success rate of 93.1%, while students enrolled in technical programs leading to a DEC achieved a success rate of 82.7%. Students enrolled in programs leading to an Attestation d'études collégiales (AEC–attestation of college studies) or a Certificat d'études collégiales (CEC–certificate of college studies) achieved a success rate of 65.7%. Students enrolled in shorter programs therefore did not do as well on the French examination.

Table 4.6a

Success rate for the ministerial examination of college French, by gender and type of program (%)

	Success rate		
	1997-1998	1998-1999	1999-2000
Female	89.4	90.8	90.7
Male	84.2	85.4	84.4
Pre-university education (DEC)	91.8	93.2	93.1
Technical education (DEC)	81.7	83.3	82.7
Overall examination	**87.3**	**88.6**	**88.1**

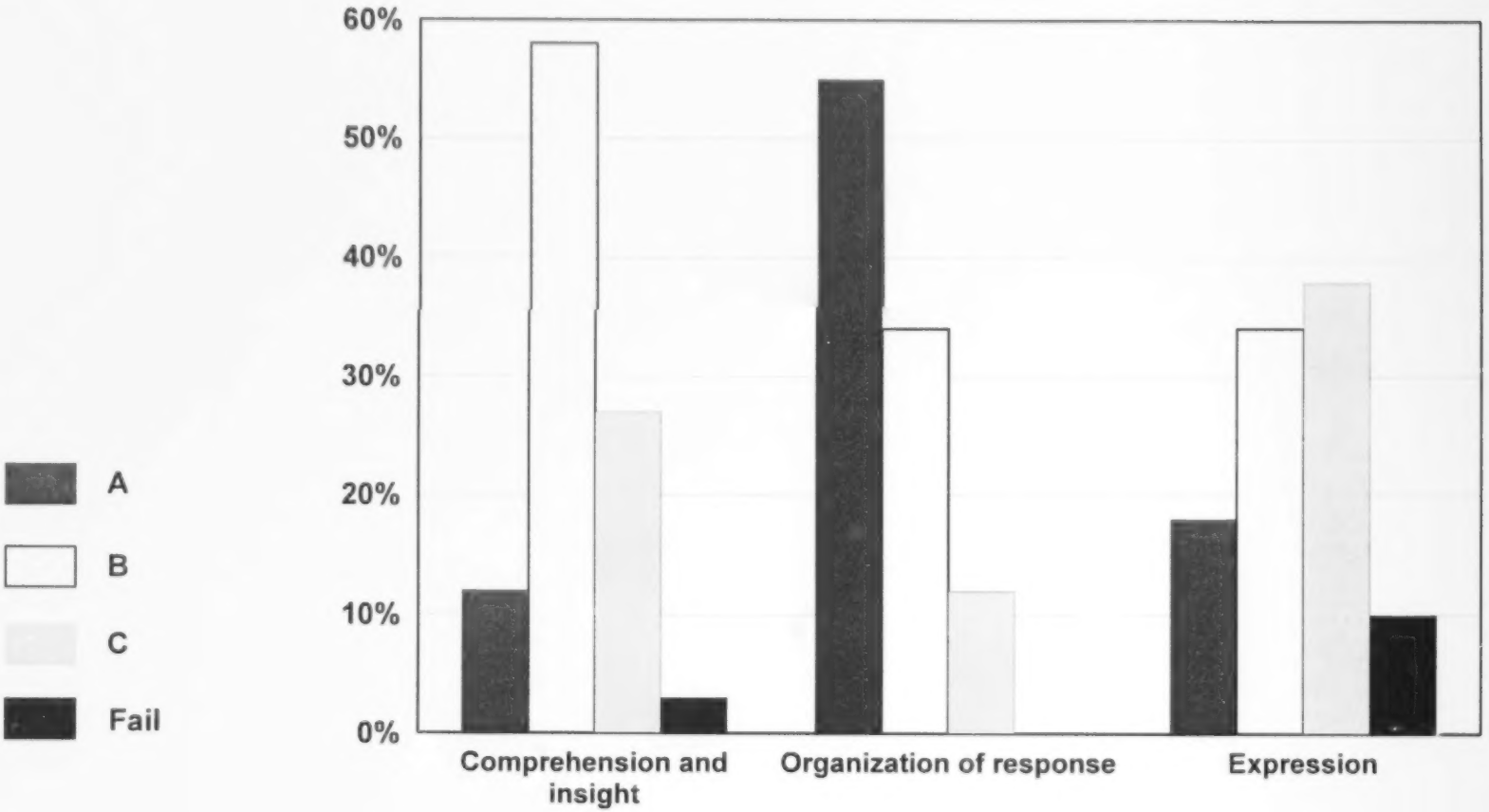
Table 4.6b

Distribution of students according to the grade obtained on each criterion of the ministerial examination of college French, 1999-2000 (%)

Criteria for the 1999-2000 examination	Distribution of students (%)				Success rate
	A	B	C	Fail	
Comprehension and insight	12.2	58.2	26.7	2.9	97.1
Organization of response	54.5	33.5	11.6	0.4	99.6
Expression	17.6	34.0	37.9	10.4	89.4

Graph 4.6

Distribution of students according to the grade obtained on each criterion of the ministerial examination of college French, 1999-2000



5 Results–Graduation

5.1 Level of Graduation Upon Leaving the Education System

The main data pertaining to diplomas obtained at the various levels of education appears in the diagram in the Introduction and is presented in more detail in the following sections. Organized in a different way,[1] this data may also show the distribution of a cohort of school leavers according to the highest diploma earned.[2]

In 1998-1999, 62.3% of those leaving the education system graduated with a bachelor's degree or a diploma in technical or vocational education.

Between 1975-1976 and 1998-1999, graduation rates at the secondary and university levels rose rapidly for both men and women. The increase in the proportion of new graduates with bachelor's degrees (from 14.9% to 27.3%) was accompanied, at the other extreme, by a drop of more than one half in the proportion of those leaving school without a diploma (from 43.0% to 16.5%). This decline has resulted in a significant increase in all the other categories.

Thus, the proportion of school leavers who are not prepared for the labour market, that is, persons without a diploma or with only a Secondary School Diploma (SSD) in general education or a pre-university Diploma of College Studies (DCS) (including DCSs without mention) dropped from 64.6% in 1975-1976 to 37.7% in 1998-1999. This decline of 26.9 percentage points is reflected by increases of 12.4 percentage points in the proportion of graduates with a bachelor's degree and 14.5 percentage points in the proportion of holders of vocational or technical education diplomas (10.0 and 4.5 percentage points, respectively).

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1. It is assumed that the diplomas awarded at a given level are preceded by a diploma at a lower level. For example, the number of bachelor's degrees should be a subset of the number of DCSs; it follows that the surplus of DCSs in relation to the bachelor's degrees would represent the number of DCSs that are not followed by a university degree. For this reason, there are no persons with a DCS in pre-university education or without mention as a last diploma in 1975-1976 and 1995-1996. An additional hypothesis makes it possible to estimate the number of DCSs in technical education that are followed by a bachelor's degree. It is also assumed that secondary vocational education diplomas are not followed by another higher-level diploma. Partial studies at a given level are grouped with the diploma immediately below: for example, uncompleted college studies are considered with the SSDs in general education.
2. This level of schooling is different from the level for the general population as indicated in the census, the latter being primarily a historical reflection of all the generations in question. The level measured here is the schooling for persons currently leaving the education system. It also shows what the general state of schooling would be if current trends were to continue.

A glance at the situation according to gender highlights the disparities already observed in the schooling of men and women. In 1999, one and a half times more women than men graduated with a bachelor's degree or with a college diploma in technical education (47.5% compared with 30.9%), while roughly two and a half times fewer women than men left school without a diploma (9.5% compared with 23.2%).

Table 5.1

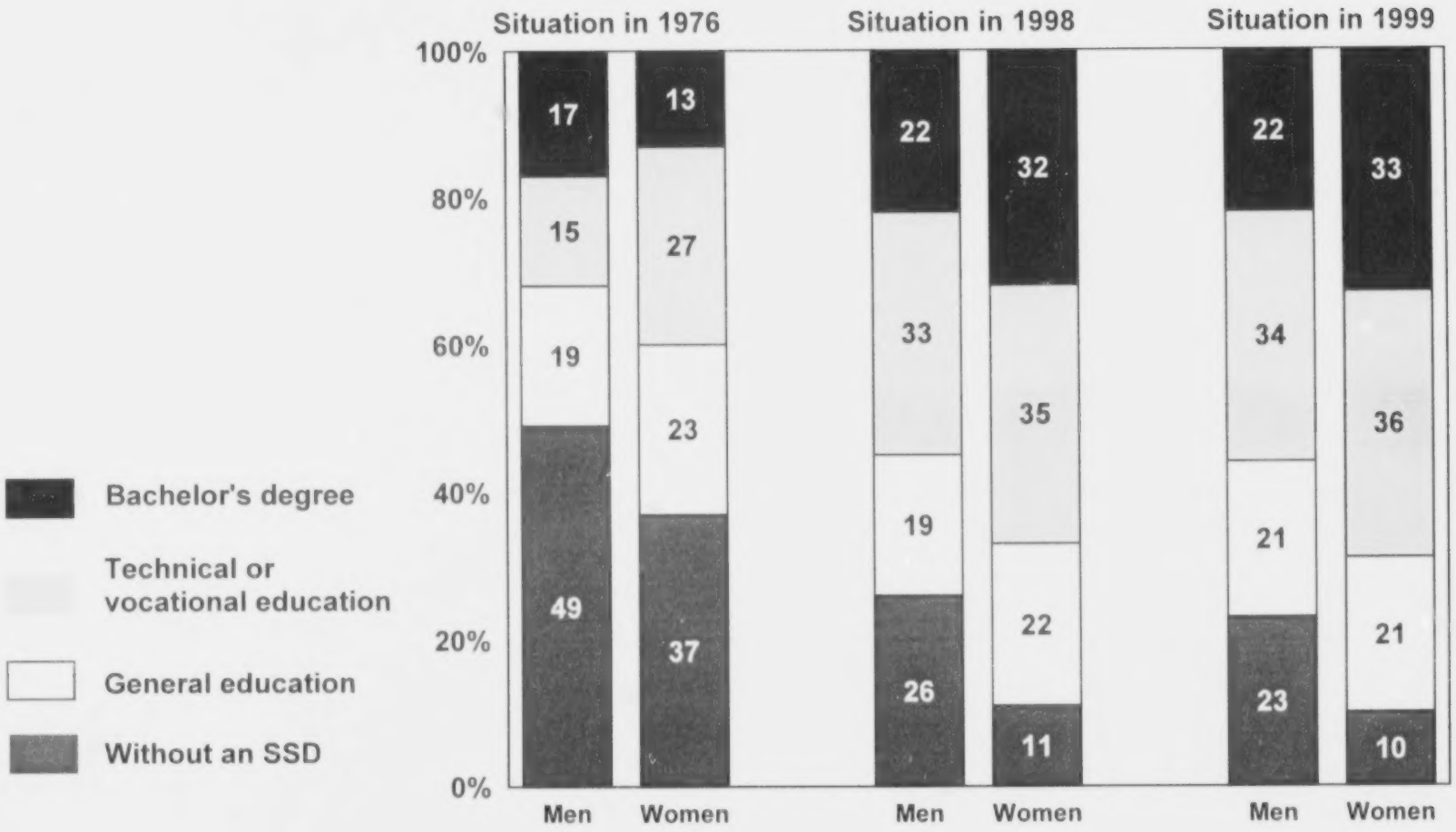
Distribution of school leavers, by highest diploma earned (%)

	1975-1976	1985-1986	1990-1991	1995-1996	1997-1998	1998-1999
Bachelor's degree[1]	14.9	19.0	23.6	29.0	26.7	27.3
College diploma in technical education[2]	7.4	11.2	10.3	11.1	11.5	11.9
Secondary vocational education diploma[3]	13.1	17.7	13.7	19.4	22.5	23.1
DCS or SSD (general education)	21.6	31.3	28.8	28.4	20.5	21.2
No diploma	43.0	20.8	23.6	12.0	18.9	16.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

1. Figures for university are based on the calendar year in which the school year ends.
2. The diplomas considered here are the DCS in technical education, the Attestation d'études collégiales (AEC–attestation of college studies) until 1984, the Certificat d'études collégiales (CEC–certificate of college studies) and the Diplôme de perfectionnement de l'enseignement collégial (DPEC–diploma of advanced college studies).
3. The diplomas considered here are the Short Vocational Diploma, the Long Vocational Diploma, the Secondary School Vocational Certificate (SSVC), the Diploma of Vocational Studies (DVS–known as the Secondary School Vocational Diploma [SSVD] prior to 1998), the Attestation of Vocational Specialization (AVS), the Attestation of Vocational Education (AVE) and other secondary school diplomas (SSDs) with mention of vocational specialty.

Graph 5.1

Distribution of school leavers by highest diploma or degree earned (%)



5.2 Graduation From Secondary School–Youth and Adult Sectors

The probability of obtaining a secondary school diploma[1] in 1999-2000 was 83.5%, that is, the same level as observed in 1998-1999. This figure is lower than the peak of 88.1% observed in 1995-1996.

In 1999-2000, the probability of obtaining a first secondary school diploma in the youth or adult sector was 83.5%, that is, the same level as observed in 1998-1999.

The relative stability in enrollment in Cycle Two of secondary education (see Section 2.3) and in general education in the adult sector (see Section 2.5) seems to indicate that the probability of obtaining a secondary school diploma will be relatively stable in the next few years.

In 1999-2000, for students in the youth sector and under 20 years of age in the adult sector in Québec, the probability of obtaining a secondary school diploma was 71.3%, which is almost the same level observed the previous year. The Ministère's objective is to reach a rate of 85% by the year 2010.

The graduation rate discussed here applies primarily to general education. Later (in Section 5.4) it will be seen that the graduation rate for vocational education increased in 1999-2000. The present section is primarily concerned with the first diplomas obtained.[2] It might be interesting to note that in 1999-2000, 92.1% of all the diplomas earned were first diplomas obtained in general education. This proportion was 98.0% if only diplomas obtained in the youth sector or by students under 20 years of age in the adult sector are considered.

The temporary slump in the graduation rate between 1986 and 1990 was largely due to the raising of the pass mark from 50% to 60%, which has made the diploma more valuable, yet more difficult to obtain. Students seem to have

1. The probability of obtaining a first secondary school diploma is determined by grouping the first diplomas obtained at the secondary level in general and vocational education. This indicator is a measure of the proportion of a generation that stays in school until a secondary-level diploma is earned.
2. Figures do not include the second or third vocational education diploma that a student may have earned, vocational education diplomas received after a general SSD, or SSDs obtained after a vocational education diploma.

overcome this obstacle since 1989, and the graduation rate continued to rise for a number of years. As noted, however, the graduation rate is still lower than in 1995-1996.

The probability of graduating from secondary school is greater for female students than for male students. The gap between the sexes was nearly 18 percentage points in 1989-1990, and almost 14 percentage points in 1999-2000.

The graduation rate for female students remained above 90% between 1991-1992 and 1995-1996, but dropped back to this level in 1998-1999. For male students, it passed the 80% mark in 1995-1996, but dropped back to 76.8% in 1999-2000.

Table 5.2

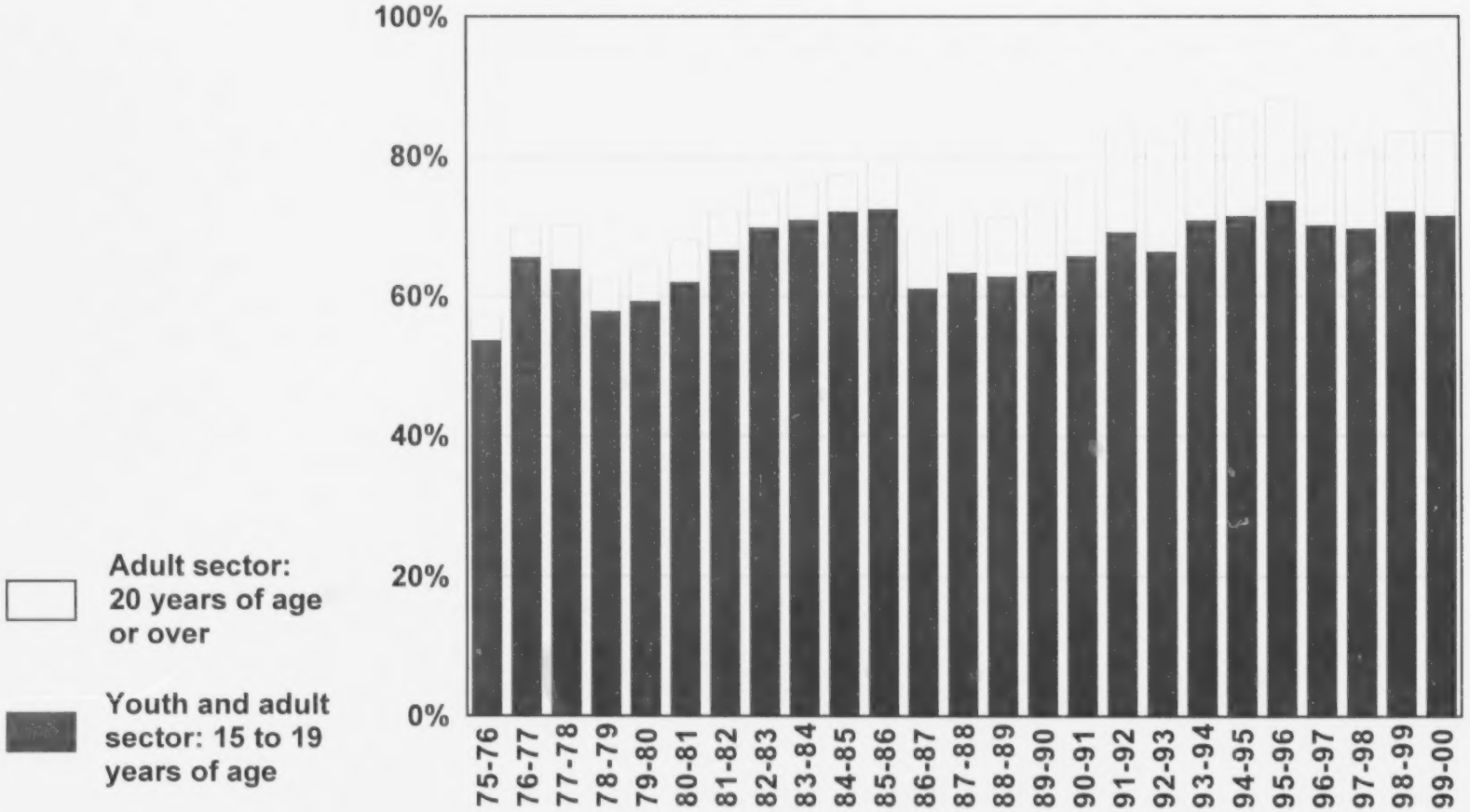
Probability of obtaining a secondary school diploma from either the youth or the adult sector, by gender (%)

	1975-1976	1985-1986	1995-1996	1997-1998	1998-1999	1999-2000[e]
Total	**57.0**	**79.2**	**88.1**	**81.1**	**83.5**	**83.5**
Adult sector: 20 years of age or over	3.5	6.8	14.6	11.6	11.5	12.1
Youth sector or before the age of 20 in the adult sector	53.6	72.3	73.5	69.5	71.9	71.3
Male	**51.2**	**73.1**	**81.5**	**74.0**	**76.8**	**76.8**
Adult sector: 20 years of age or over	3.0	6.0	14.4	12.1	11.7	12.7
Youth sector or before the age of 20 in the adult sector	48.2	67.1	67.1	62.0	65.1	64.1
Female	**63.1**	**85.6**	**95.1**	**88.6**	**90.5**	**90.4**
Adult sector: 20 years or age or over	4.0	7.6	14.8	11.1	11.3	11.5
Youth sector or before the age of 20 in the adult sector	59.1	77.9	80.3	77.4	79.2	78.9

e: Estimates

Graph 5.2

Probability of obtaining a secondary school diploma in either the youth or the adult sector (%)



5.3 Graduation From Secondary School: Regional Disparities–Youth and Adult Sectors

In 1999-2000, for 14 of the 17 administrative regions of Québec, the probability of obtaining a first secondary school diploma surpassed 80%. Only two regions were above 90%: Saguenay–Lac-Saint-Jean and Capitale-Nationale.

The regional statistics in this section[1] must be interpreted with great caution. For example, the figures vary enough for the ranking of the administrative regions, shown in Graph 5.3, to change considerably from one year to the next. However, an analysis of the statistics of the last few years seems to indicate that the regions of Saguenay–Lac-Saint-Jean, Capitale-Nationale, Bas-Saint-Laurent, Chaudière-Appalaches and Estrie are those that usually obtain the highest results, while the regions of Outaouais and Nord-du-Québec obtain the lowest results.

While the probability of obtaining a first secondary school diploma remained stable in Québec as a whole between 1998-1999 and 1999-2000, the results of some administrative regions varied by a few percentage points. For example, the graduation rate in Côte-Nord increased by more than 4 percentage points during that period.

Graph 5.3 shows the relative share of the secondary school diplomas in the youth sector and the adult sector with respect to the graduation rate for each administrative region. For example, the probability of obtaining a first secondary school diploma for the province as a whole (83.5%) is broken down as follows: 71.3% for the youth sector and adults under the age of 20, and 12.1% for adults 20 years of age or over.

1. Refers to the probability of obtaining a first secondary school diploma. The probability of obtaining a first secondary school diploma is determined by grouping the first diplomas obtained at the secondary level in general and vocational education. This indicator measures the proportion of a generation that stays in school until a secondary-level diploma is earned.

Table 5.3

Probability of obtaining a first secondary school diploma, by administrative region (%)

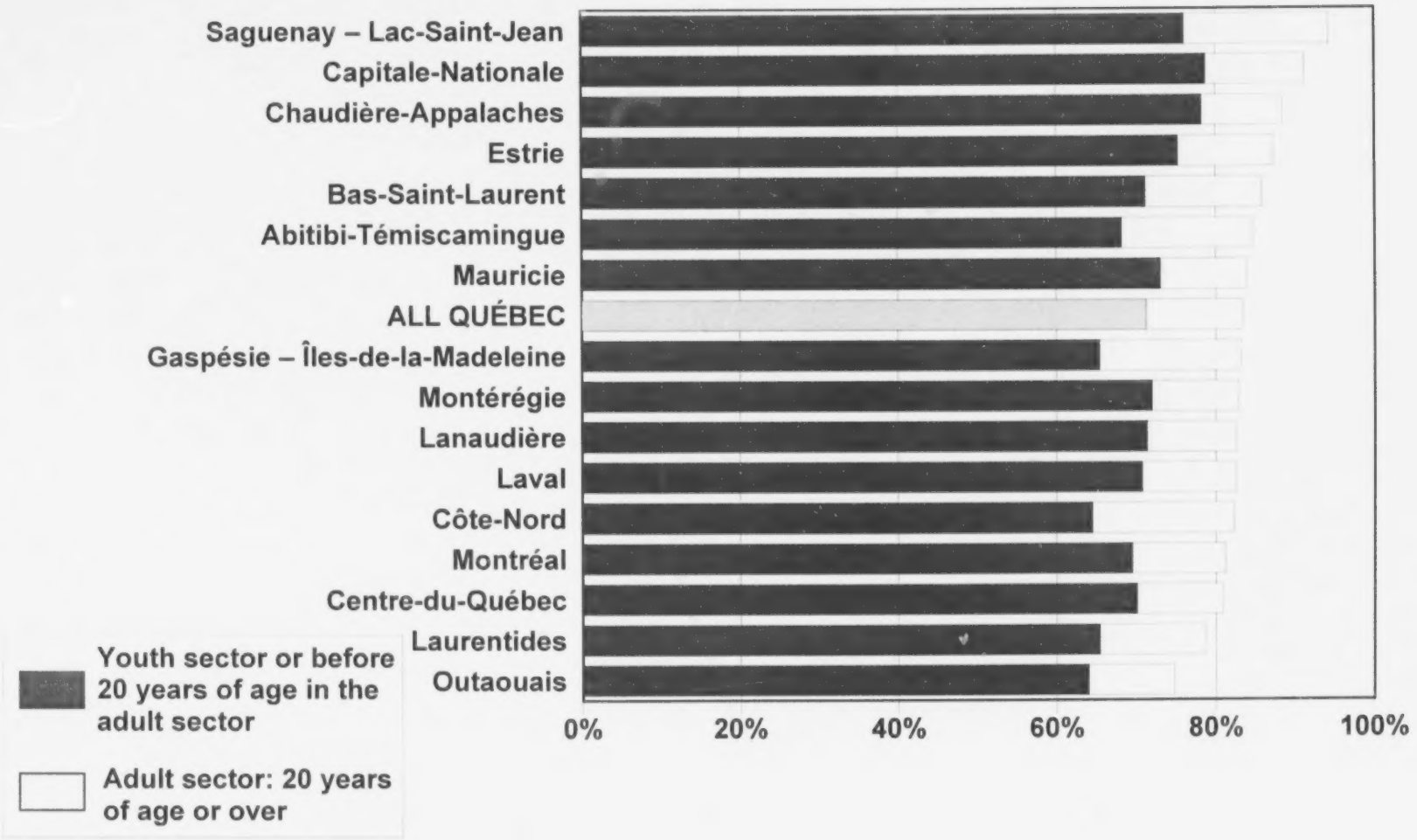
	1990-1991			1999-2000[e]		
	Youth sector or before 20 years of age in the adult sector	Adult sector: 20 years of age or over	Total	Youth sector or before 20 years of age in the adult sector	Adult sector: 20 years of age or over	Total
Gaspésie–Îles-de-la-Madeleine	61.2	19.2	80.4	65.4	17.8	83.2
Bas-Saint-Laurent	70.0	17.3	87.4	71.2	14.6	85.8
Saguenay–Lac-Saint-Jean	66.2	19.8	85.9	76.1	18.2	94.3
Capitale-Nationale	72.8	11.6	84.5	78.8	12.4	91.2
Chaudière-Appalaches	72.0	11.5	83.5	78.3	10.2	88.4
Mauricie	66.5	10.4	76.9	73.1	10.8	83.9
Centre-du-Québec	68.2	13.1	81.3	70.1	10.8	81.0
Estrie	69.8	12.7	82.5	75.3	12.0	87.3
Montérégie	66.8	8.7	75.5	72.0	10.9	82.9
Montréal	64.7	9.1	73.8	69.5	11.7	81.2
Laval	66.0	9.3	75.3	70.8	11.7	82.4
Lanaudière	64.0	10.7	74.7	71.4	11.2	82.6
Laurentides	60.9	9.2	70.1	65.4	13.3	78.7
Outaouais	54.2	13.8	68.0	64.0	10.8	74.8
Abitibi-Témiscamingue	54.2	18.3	72.5	68.2	16.5	84.7
Côte-Nord	56.5	15.2	71.7	64.5	17.8	82.2
Nord-du-Québec	N/A	N/A	N/A	N/A	N/A	N/A
All Québec	**65.6**	**11.2**	**76.7**	**71.3**	**12.1**	**83.5**

e: Estimates

N/A: Data not available. In the case of Nord-du-Québec, the data has too many random variations: the rates calculated are not reliable and would not accurately reflect the region's situation.

Graph 5.3

Probability of obtaining a first secondary school diploma, by administrative region: 1998-1999 (%)



5.4 Graduation From Secondary Vocational Education–Youth and Adult Sectors

Based on behaviours observed in 1999-2000, 24 out of 100 young Quebeckers can expect to obtain a vocational education diploma[1] in secondary school.[2] This group includes 17 persons who already have a first Secondary School Diploma (SSD) in general education. Since the beginning of the vocational education reform in 1987-1988, a growing number of persons obtaining a vocational diploma are doing so after earning a diploma in general education.

The proportion of a generation of students obtaining a secondary school vocational education diploma was 24.2% in 1999-2000. This is the highest rate ever recorded.

Moreover, the probability of obtaining a first secondary school diploma from the youth sector or before the age of 20 in the adult sector through vocational education was 1.8% in 1999-2000; this rate was higher than 16% in 1977-1978. This confirms that obtaining a first diploma in vocational education is becoming less common and that students in the youth sector or those under the age of 20 in the adult sector who obtain a first secondary school diploma (71.3% in 1999-2000) are most likely to do so in general education (see Section 5.2).

The very nature of vocational education diplomas has also changed. Short vocational programs have been phased out in favour of general education. The basic difference between the Diploma of Vocational Studies (DVS) and its predecessor, the Long Vocational Diploma, is that the DVS deals exclusively with vocational education, since all the components of the vocational programs dealing with general education have been transferred to the SSD.

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1. The diplomas considered here are the Short Vocational Diploma, the Long Vocational Diploma, the Secondary School Vocational Certificate (SSVC), the Diploma of Vocational Studies (DVS) (known as the Secondary School Vocational Diploma–SSVD prior to 1998), the Attestation of Vocational Specialization (AVS), the Attestation of Vocational Education (AVE) and other secondary school diplomas (SSDs) with mention of vocational specialty.
2. Refers to the probability of obtaining a first secondary school diploma. This rate is determined by grouping only the first secondary school diplomas in vocational education. This indicator measures the proportion of a generation that stays in school until a secondary-level diploma is earned in vocational education.

The difference between male and female students is much less pronounced than in general education. Nevertheless, vocational education represents a larger share of the graduation rate for male students (26.1%) than for female students (22.3%).

In 1998-1999, 6 855 vocational education diplomas[3] were granted to students in the youth sector or to students under the age of 20 in the adult sector. The Ministère's objective was to award 18 500 diplomas before 2000.

3. All vocational education diplomas are considered here, be they the first, second, third, and so on, earned by a student. The other statistics in this section deal only with the first vocational education diploma, which may be the first diploma earned at the secondary level or the diploma earned after having obtained an SSD in general education.

Table 5.4

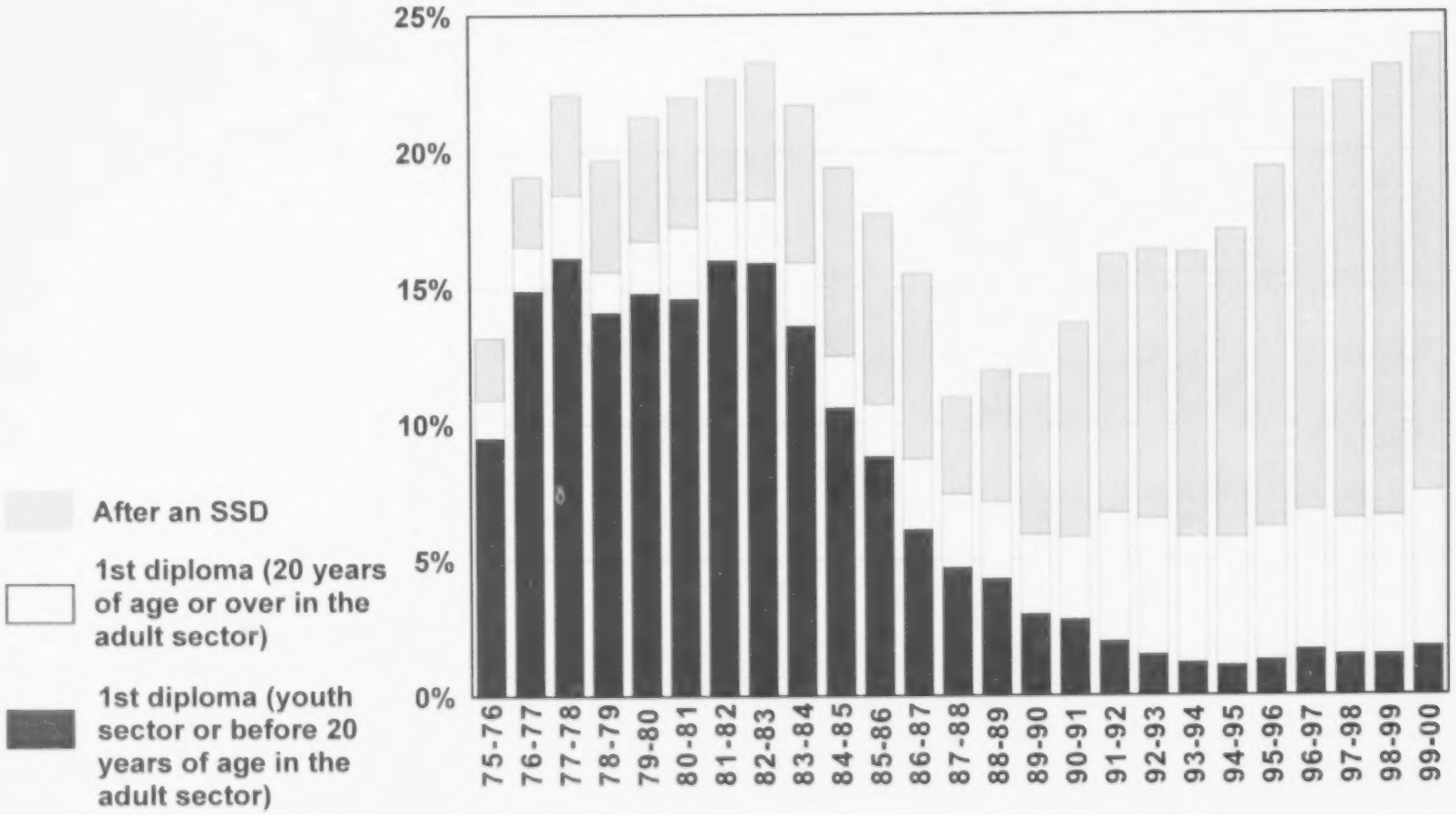
Probability of obtaining a vocational education diploma, by sector, age and gender (%)

	1975-1976	1985-1986	1995-1996	1997-1998	1998-1999	1999-2000[e]
Total	**13.1**	**17.7**	**19.4**	**22.5**	**23.1**	**24.2**
Male	9.8	17.0	21.0	24.2	24.5	26.1
Female	16.6	18.4	17.8	20.7	21.6	22.3
First diploma	10.9	10.7	6.2	6.5	6.6	7.5
After an SSD	2.3	7.0	13.2	16.0	16.5	16.7
Youth sector or before 20 years of age in the adult sector	**11.6**	**15.1**	**4.7**	**5.9**	**6.0**	**6.1**
First diploma	9.5	8.8	1.3	1.5	1.5	1.8
After an SSD	2.1	6.4	3.5	4.4	4.4	4.3
Adult sector: 20 years of age or over	**1.6**	**2.5**	**14.7**	**16.6**	**17.1**	**18.1**
First diploma	1.4	1.9	4.9	5.0	5.1	5.7
After an SSD	0.2	0.6	9.7	11.6	12.1	12.4

e: Estimates
SSD: Secondary School Diploma

Graph 5.4

Probability of obtaining a vocational education diploma, by sector and agee (%)



5.5 Graduation From Secondary School in OECD Countries

In 2000, the Organisation for Economic Co-operation and Development (OECD) published its *Education at a Glance*, containing indicators on graduation from secondary school in OECD countries in 1998.

In 1998, the probability of obtaining a secondary school diploma[1] in Québec was 81%, slightly higher than the OECD average.[2]

Table 5.5 compares the situation in Québec with that in a number of industrialized OECD nations with respect to graduation from secondary school. In 1998, despite a drop of 7 percentage points since 1996, the graduation rate in Québec (81%) was higher than that in the OECD countries.

Québec did not do as well as New Zealand, Japan, the Netherlands, Germany, Iceland, Korea, Hungary, Finland, France, Ireland, the Belgian Flemish community or Greece, but did better than the Czech Republic, Sweden, the United States, Canada as a whole, Spain and Portugal.

In most OECD countries, female students were more likely to graduate than male students. In Québec, there was a difference of 15 percentage points between the graduation rates of these two groups. A similar disparity in favour of female students was also observed in Japan (16 percentage points), Ireland (14 percentage points), Finland, Spain and Portugal (12 percentage points), Canada as a whole (11 percentage points) and Greece (10 percentage points). The graduation rate for male students in Québec (73%) was 7 percentage points lower than the average for male students in the OECD countries (80%), while the rate for female students went from 8 percentage points above the OECD average in 1996 to only 4 percentage points in 1998.

There are far more students in general education in Québec than there are in vocational education, and this holds true for both male and female students. With a probability of obtaining a diploma in general education of 76%, Québec

1. For Québec, this rate was obtained by dividing the number of "first diplomas" awarded in 1998 by the number of 17-year-olds in Québec (the age at which a secondary school diploma is generally awarded in Québec).
2. For further information on this comparison with the OECD countries, refer to the following *Education Statistics Bulletin*, published by the Direction des statistiques et des études quantitatives of the Ministère de l'Éducation du Québec: Foucault, Diane. *Graduation in Québec and the OECD Countries*, No. 21, January 2000. This document is available on the Internet at <http://www.meq.gouv.qc.ca>.

ranks second among the OECD countries, after Ireland (80%), but before Japan (70%), New Zealand (62%) and the other OECD countries.

The reverse is true in vocational education. Québec's graduation rate is 22%, while the average for the OECD countries is 47%. A number of countries obtained very high results in vocational education, that is, Hungary (71%), France (68%), the Czech Republic (67%), the Belgian Flemish community (64%) and Germany and Finland (60%). The results in vocational education are better than those in general education in half the OECD countries.[3]

Unlike the case for general education, the probability of obtaining a diploma in vocational education in Québec is slightly higher for male students than for female students. Ten OECD countries show greater discrepancies, from 1 to 18 percentage points in favour of male students. The greatest difference was observed in Iceland.

3. The differences between the education systems in the various OECD countries explain the fluctuations observed in the probability of obtaining diplomas in secondary school general and vocational education.

Table 5.5

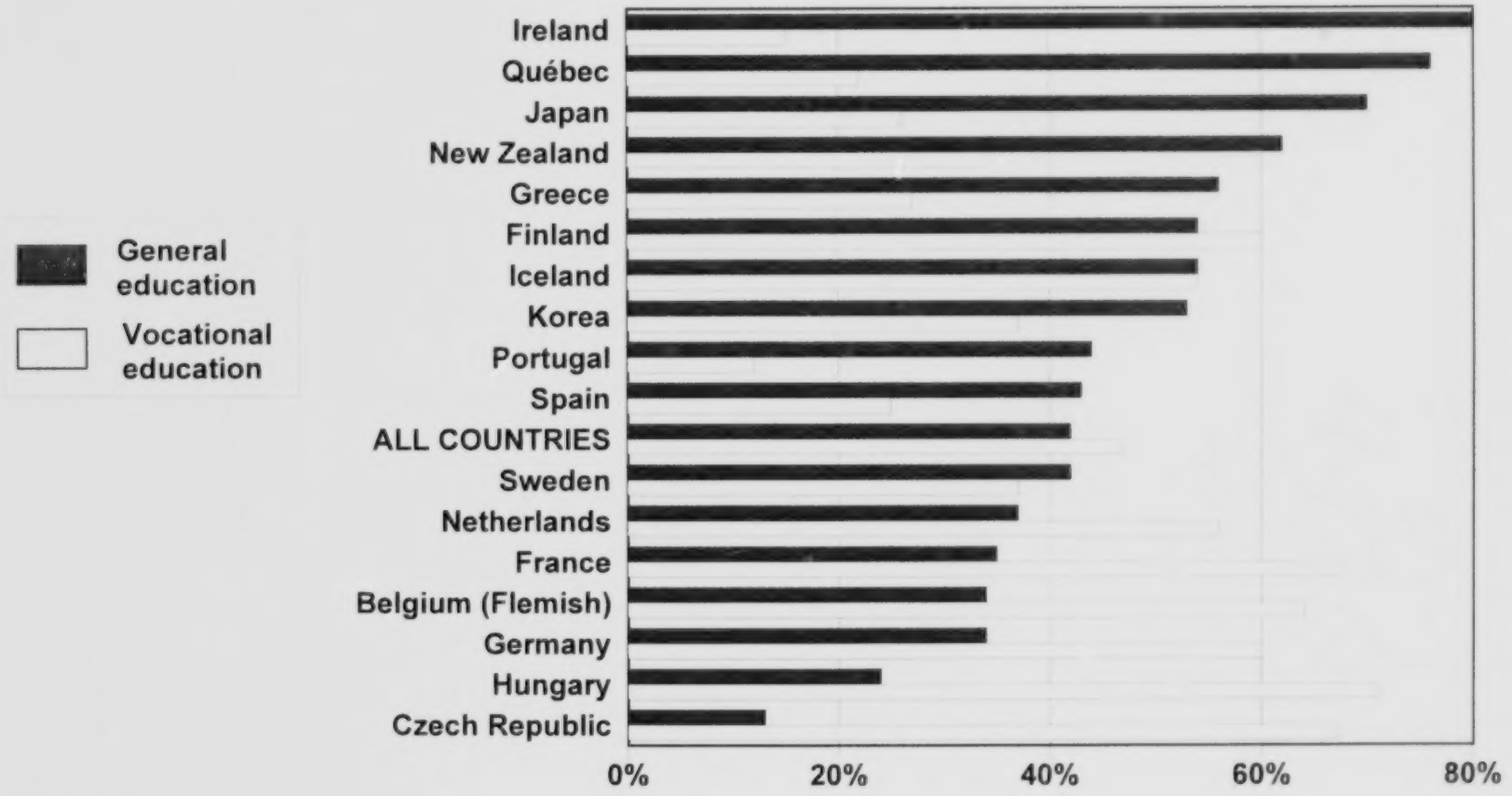
Probability of obtaining a secondary school diploma, by gender and type of program, OECD countries, 1998 (%)

	Total (without double counting)			General education		Vocational education	
	M + F	Male	Female	M + F	Female	M + F	Female
New Zealand	97	N/A	N/A	62	67	34	40
Japan	96	93	99	70	74	26	24
Netherlands	93	91	96	37	40	56	56
Germany	93	91	95	34	37	60	59
Iceland	92	94	89	54	64	54	36
Korea	90	91	90	53	49	37	41
Hungary	90	87	93	24	30	71	67
Finland	89	83	95	54	65	60	62
France	87	85	88	35	41	68	62
Ireland	87	80	94	80	86	15	16
Belgium (Flemish)	84	82	86	34	39	64	64
Greece	83	78	88	56	65	27	23
Québec	**81**	**73**	**88**	**76**	**85**	**22**	**20**
Czech Republic	80	77	83	13	16	67	67
Sweden	79	76	82	42	45	37	37
United States	74	70	77	N/A	N/A	N/A	N/A
Canada (including Québec)	**72**	**67**	**78**	**N/A**	**N/A**	**N/A**	**N/A**
Spain	67	61	73	43	49	25	26
Portugal	56	50	62	44	50	12	12
Average	**79**	**80**	**84**	**42**	**49**	**47**	**46**

N/A: Data not available

Graph 5.5

Probability of obtaining a secondary school diploma, general and vocational education: Québec and OECD countries, 1998 (%)



5.6 Graduation From College

In 1998-1999, the proportion of a generation who could expect to obtain a first college diploma, be it a Diploma of College Studies (DCS) or any other diploma, was 39.3%. This is an increase of 17.1 percentage points since 1975-1976, when it stood at 22.2%. The proportion of a generation who are admitted to college (see Section 2.9) and the proportion of students who obtain a diploma upon leaving college (see Sections 3.3 and 3.4) are combined to produce this result.

While the proportion of young female Quebeckers who could expect to obtain a college diploma had risen by more than 10 percentage points (39.2% to 49.4%) since 1985-1986, the proportion of young male Quebeckers who could expect to obtain a college diploma remained stable and stood at 29.8% in 1998-1999.

The probability of women obtaining a diploma (DCS or other) was approximately one and a half times higher than for men (49.4% compared with 29.8%). The gap between the sexes grew steadily during the 1980s and 1990s. In 1975-1976, the probability of obtaining a college diploma[1] was already 2.7 percentage points higher for women than for men. Since then, the probability has continued to rise more sharply for women, and the gap is now almost 20 percentage points. In fact, in the past 15 years or so, it is virtually only among women that the probability of obtaining a college diploma has grown.

The greatest growth occurred with the pre-university DCS, as the probability of obtaining this type of diploma rose from 13.5% to 24.5% between 1975-1976 and 1998-1999, an increase of 11.0 percentage points, compared with a rise of 7.3 percentage points for the technical DCS over the same period. In the past two years, however, only in technical education did the probability of obtaining a diploma increase (1.4 percentage points), while it dropped by 1.0 percentage points for a pre-university DCS.

For both types of programs, the number of women graduating between 1975-1976 and 1998-1999 exceeded the number of men, and the gap between the sexes continued to widen. The probability of women obtaining a pre-university DCS increased by 18.8 percentage points, compared with a rise of 3.6 for men. On the other hand, for both

1. The probability of obtaining a first college diploma measures the proportion of a generation that stays in school until a college diploma is earned.

sexes the probability of obtaining a technical DCS grew more modestly, although the increase for men was more pronounced in technical education (6.3 percentage points) than in pre-university education (3.6 percentage points). Women were ahead of men by 4.0 percentage points in 1975-1976, and by 6.1 percentage points in 1998-1999.

The Ministère's objective for the year 2010 is a college graduation rate of 60% for young Quebeckers; in 1998-1999, the rate was 39.3%. The gap between the actual rate and the objective is greater than the increase recorded over the past 23 years, since the probability of obtaining a DCS in 1975-1976 was 21%.

Table 5.6

Probability of obtaining a first college diploma, by gender and type of education (%)

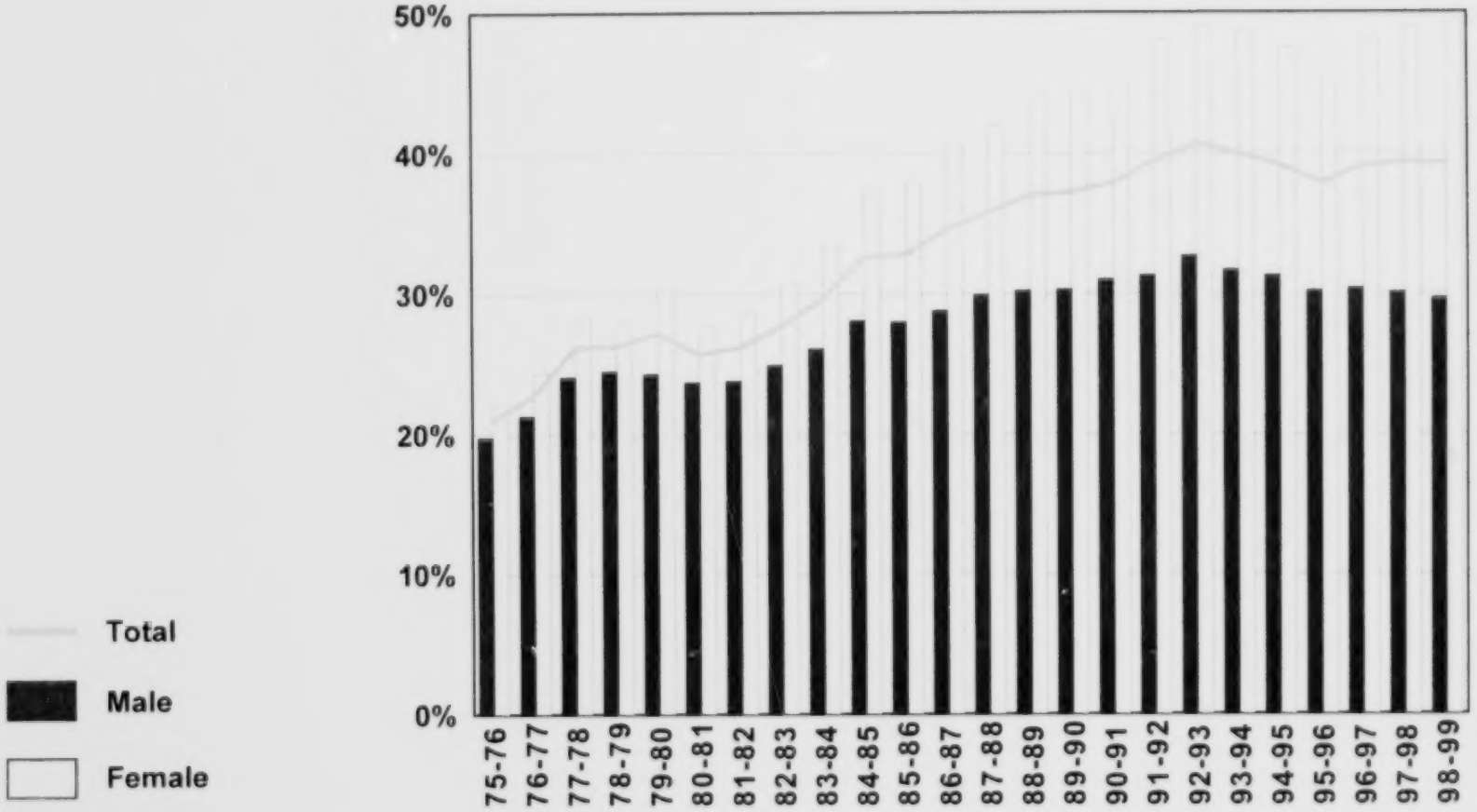
	1975-1976	1985-1986	1995-1996	1996-1997	1997-1998	1998-1999[e]
Male						
All diplomas[1]	20.8	29.7	30.5	30.5	30.2	29.8
DCS[2]	**19.8**	**28.0**	**30.2**	**30.4**	**30.1**	**29.7**
Pre-university education	14.3	18.7	19.2	19.6	19.0	17.9
Technical education	5.5	9.0	10.7	10.9	11.2	11.8
Female						
All diplomas[1]	23.5	39.2	46.4	48.3	49.1	49.4
DCS[2]	**22.2**	**37.9**	**46.0**	**48.2**	**49.1**	**49.4**
Pre-university education	12.7	23.6	29.6	31.9	31.8	31.5
Technical education	9.5	13.9	16.1	16.3	17.3	17.9
Total						
All diplomas[1]	22.2	34.3	38.2	39.1	39.4	39.3
DCS[2]	**21.0**	**32.8**	**37.9**	**39.0**	**39.4**	**39.3**
Pre-university education	13.5	21.1	24.3	25.5	25.2	24.5
Technical education	7.5	11.4	13.4	13.4	14.2	14.8

e: Estimates

1. The diplomas considered here are the Diploma of College Studies (DCS), the Attestation d'études collégiales (AEC–attestation of college studies) until 1984, the Certificat d'études collégiales (CEC–certificate of college studies) and the Diplôme de perfectionnement de l'enseignement collégial (DPEC–diploma of advanced college studies). Since 1994, there have been no new enrollments in programs leading to a CEC or to a DPEC.
2. These figures include DCSs without mention of vocational specialty.

Graph 5.6

Probability of obtaining a first college diploma, by gender (%)



5.7 Graduation From University[1]

In 1999, the probability of obtaining a bachelor's degree increased after having dropped twice since its peak of 29.0% in 1996, to finally settle at 27.3%.

Based on behaviours observed in 1999, more than one quarter of young Quebeckers (27.3%) can expect to obtain a bachelor's degree. In the past several years, more women than men have enrolled in university (see Section 2.11). The situation for the two sexes has changed drastically since 1976, when the probability of obtaining a bachelor's degree was 13.1% for women and 16.7% for men. In 1983, the probability for both sexes was more similar and, since then, the increase in probability has been in women's favour. In 1999, the probability of obtaining a bachelor's degree was 33.0% for women and 21.9% for men, or an increase of 19.9 percentage points for women and 5.2 percentage points for men.

The Ministère's objective for the year 2010 is a university graduation rate of 30% for young Quebeckers. The current rate (27.3%) shows a slight increase despite a series of drops in enrollment in bachelor's programs between 1992-1993 and 1997-1998 (see Section 2.11). The recovery of the enrollment rate in the past two years appears to herald an end to the drop in the graduation rate. The probability of obtaining a bachelor's degree is nevertheless higher in Québec than the average of 23.2% recorded for member countries of the Organisation for Economic Co-operation and Development (OECD) in 1998 (see Section 5.9).

With regard to obtaining a master's degree, the results have continued to increase and reached 6.9% for women and 6.1% for men. For both sexes, the rate of 6.5% represents more than double the 1976 rate (2.7%). An increase in enrollment at the master's level (see Section 2.11) points to a continued increase in the number of master's degrees awarded for at least a few years to come. The difference between the sexes here is much less significant (0.8 percentage points) than for the bachelor's degree, but could widen in favour of women, given the growing margin in earning a bachelor's degree. Since 1976, the situation of men and women has reversed; whereas the initial gap was 1.6 percentage points in favour of men, the probability of women obtaining a master's degree has climbed from 1.9% to 6.9%, moving ahead of the probability for men in 1993.

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1. Only university degrees (bachelor's, master's and doctoral degrees) awarded by Québec universities are considered here. Degrees earned by Quebeckers outside the province are not taken into account.

Doctorates are still only earned by a minute fraction of the population–only 1.0%. This last phase in the education system is perhaps the only one in which men continue to outnumber women. Figures are, however, minimal for both sexes: 1.3% of men obtain a doctorate, compared with 0.8% of women. In view of developments at the master's level, the pool of aspiring doctoral candidates is also likely to increase for some time to come.

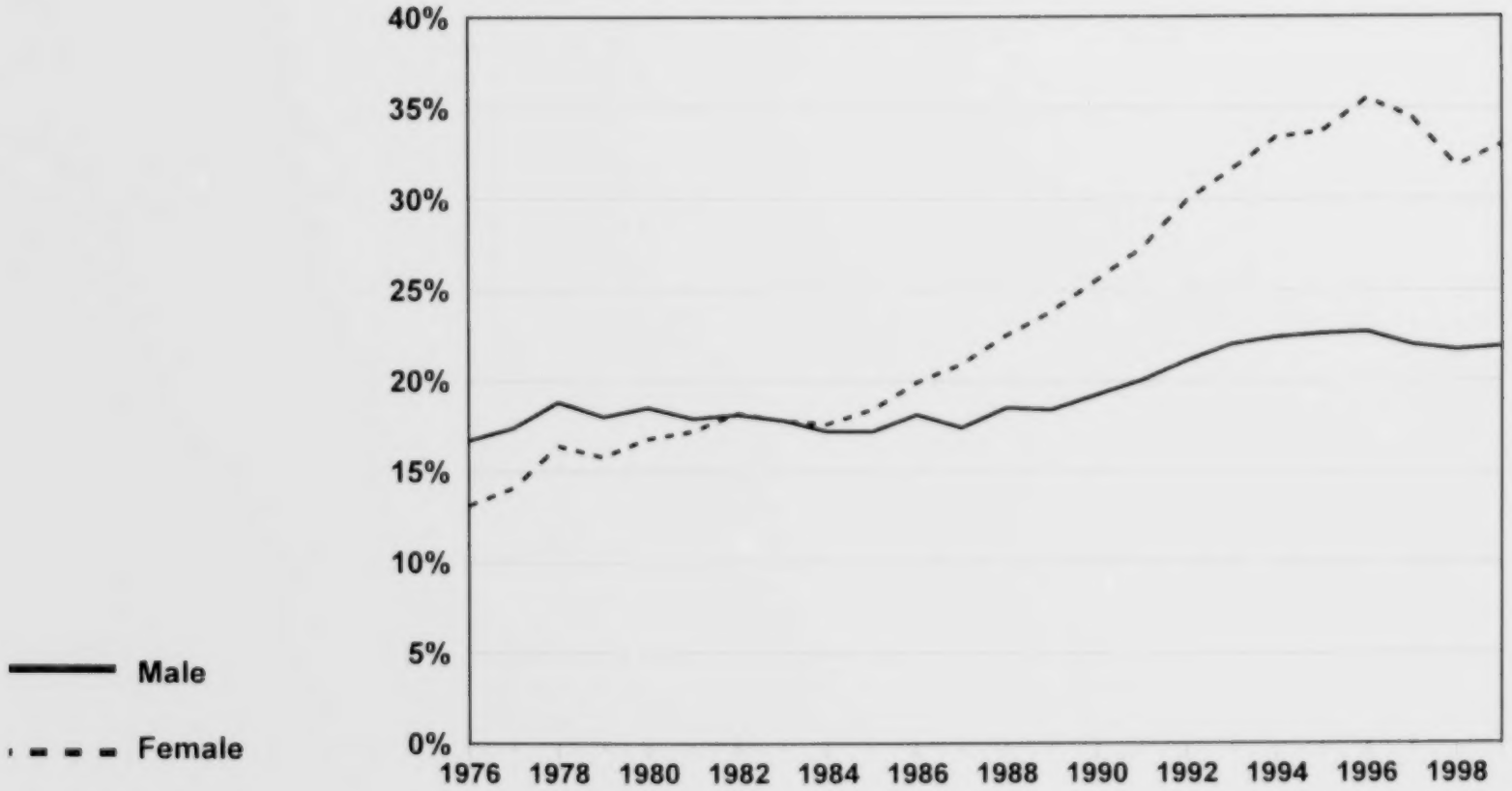
Table 5.7

Probability of obtaining a university degree, by gender (%)

	1976	1986	1991	1996	1998	1999
Bachelor's degree	**14.9**	**19.0**	**23.6**	**29.0**	**26.7**	**27.3**
Male	16.7	18.1	20.0	22.7	21.7	21.7
Female	13.1	19.9	27.3	35.5	31.8	33.0
Master's degree	**2.7**	**3.9**	**4.4**	**6.0**	**6.4**	**6.5**
Male	3.5	4.4	4.4	5.8	6.0	6.1
Female	1.9	3.4	4.3	6.3	6.8	6.9
Doctorate	**0.4**	**0.5**	**0.6**	**0.9**	**1.0**	**1.0**
Male	0.6	0.7	0.9	1.2	1.3	1.3
Female	0.2	0.3	0.4	0.6	0.8	0.8

Graph 5.7

Probability of obtaining a bachelor's degree, by gender (%)



5.8 University Degrees by Field of Study[1]

In 1999, the largest proportion (28.4%) of bachelor's, master's and doctoral degrees issued by Québec universities were earned in the humanities, followed by business administration (19.6%), education (12.4%), engineering and architecture (10.2%), health sciences (9.1%), and natural sciences (8.0%). Social sciences represented 5.1%, mathematics and computer sciences, 4.0% and law, 3.1% of degrees earned.

In 1999, the proportion of degrees earned in engineering and architecture, and mathematics and computer science accounted for 14.2% of all the bachelor's, master's and doctoral degrees awarded. In these fields of study, more men (77.5%) obtained degrees than women. However, more women earned degrees in the other fields of study (except business administration) as well as in all fields combined.

The majority of degree holders are women (57.0%). In 1999, women earned 76.0% of the degrees in education, 75.6% in social sciences, 73.1% in health sciences, 65.6% in the humanities, 59.0% in law and 50.5% in natural sciences. However, men earned 79.4% of the degrees in engineering and architecture,[2] 72.5% in mathematics and computer science and 52.6% in business administration.

Compared with 1990, the number of degrees issued by universities in 1999 rose by 15.5%. This percentage is the result of a 23.3% increase in the number of degrees awarded to women and a 6.5% increase for men.

In the past ten years, the distribution of the degrees awarded according to field of study has changed. Between 1990 and 1999, for example, the number of degrees in business administration has dropped (by 3.0 percentage points) as has, to a lesser extent, the number of degrees in engineering and architecture (by 0.9 percentage points) and law (by 0.4 percentage points). At the other extreme, the number of degrees awarded in the humanities has risen by 2.1 percentage points, education by 1.3 percentage points, health sciences by 0.5 percentage points and natural sciences and health sciences, by 0.2 percentage points.

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1. This refers to students who earned a university degree (bachelor's, master's or doctoral degree) during the year in question.
2. The proportion of degrees in engineering and architecture earned by women rose from 16.8% in 1990 to 20.6% in 1999.

For member countries of the Organisation for Economic Co-operation and Development (OECD),[3] degrees earned in the sciences (natural sciences, mathematics and computer science, and engineering and architecture) accounted for 28% of the total number of degrees earned in 1998; in Québec, this proportion was 22.2% in 1999. The proportion of degrees in social sciences, law and business administration was 32% for the OECD countries in 1998 and 27.8% for Québec in 1999, whereas the proportion of degrees in health sciences was 11% for the OECD countries in 1998 and 9.2% for Québec in 1999. Degrees in the humanities (including education) represented 29% for the OECD countries and 40.8% for Québec.

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3. Source: OECD, *Education at a Glance–OECD Indicators* (Paris: 2000). Any comparison between the results presented in this section and those published by the OECD must take into account the different methodologies used to obtain the results.

Table 5.8

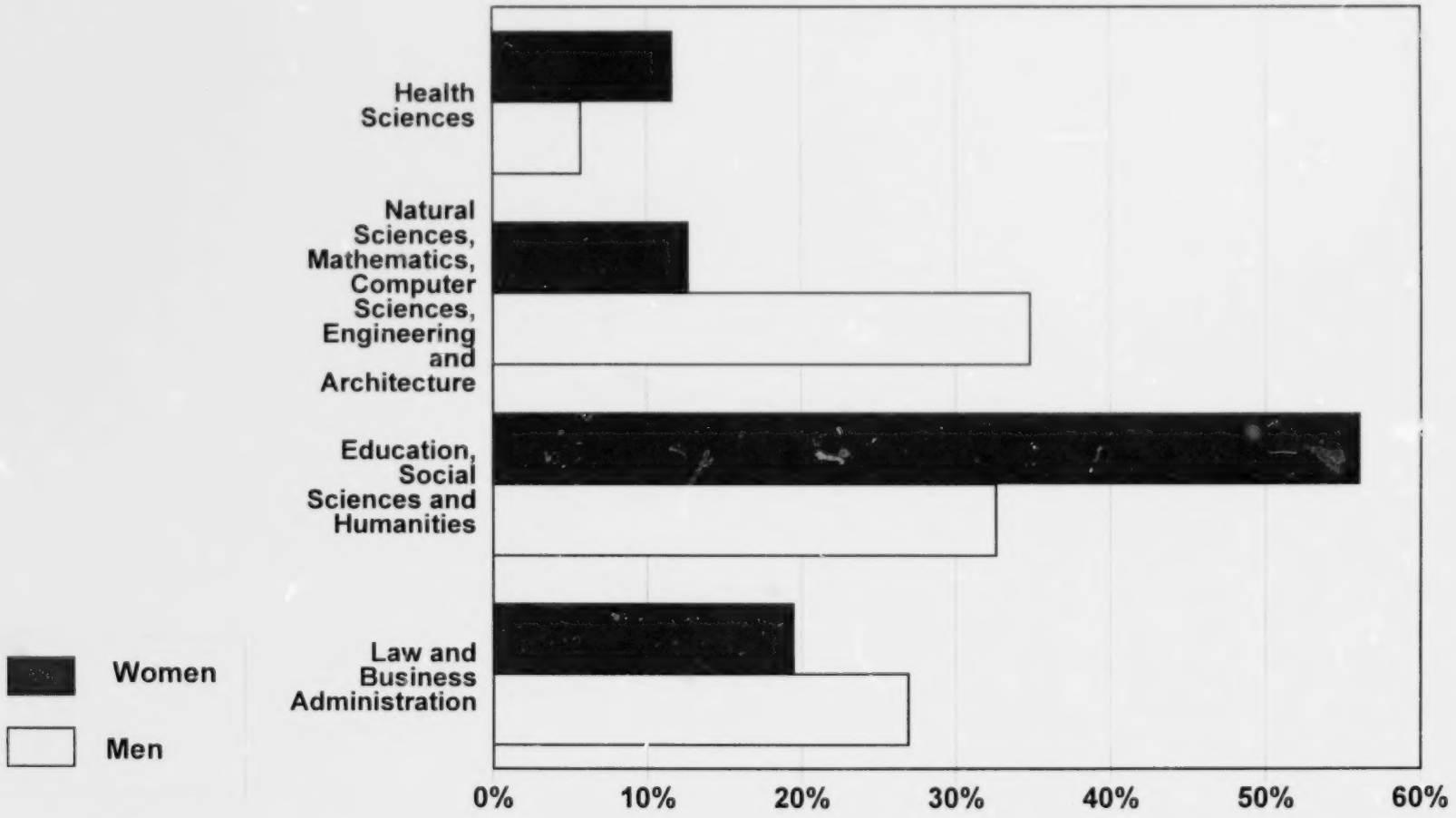
Distribution of university degrees, by field of study and gender[1] (%)

	1990	1993	1995	1996	1997	1998	1999
Health sciences	8.7	8.7	8.9	8.8	9.3	8.8	9.1
Natural sciences	7.8	6.7	6.5	7.3	7.6	8.0	8.0
Mathematics and computer science	4.0	3.8	3.6	3.5	3.8	3.8	4.0
Engineering and architecture	11.1	10.6	11.0	10.6	10.1	10.2	10.2
Law	3.5	3.6	3.2	3.3	3.3	3.4	3.1
Business administration	22.6	22.6	20.0	18.7	18.5	20.1	19.6
Education	11.1	12.8	15.1	15.2	13.2	10.3	12.4
Humanities	26.3	26.6	27.3	27.8	29.1	30.0	28.4
Social sciences	4.9	4.6	4.4	4.8	5.1	5.4	5.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Female	53.4	55.3	56.4	57.6	57.6	56.6	57.0
Male	46.6	44.7	43.6	42.4	42.4	43.4	43.0

1. Only holders of bachelor's, master's or doctoral degrees who obtained their degree in the year in question are considered.

Graph 5.8

Distribution of university degrees, by field of study and gender: 1999 (%)



5.9 Graduation From University in OECD Countries

In 2000, the Organisation for Economic Co-operation and Development (OECD) published its *Education at a Glance*, containing indicators on graduation from university in OECD countries in 1998.

In 1998, the probability of obtaining a first bachelor's degree in Québec was 26.6%, and the average observed for the OECD countries[1] was 23.2%.

Table 5.9 compares the situation in Québec with that in a number of industrialized OECD nations with respect to graduation from university. In 1998, the probability of obtaining a bachelor's degree was 26.6% in Québec, that is, 3.4 percentage points above the OECD average, down from 5 percentage points two years earlier. Meanwhile, Québec lost 2 percentage points while the OECD average decreased by only 1 percentage point.

In 1998, 9 of the 29 OECD countries had a higher probability of obtaining a first university degree (bachelor's) than Québec, that is, Norway (38.3%), the United Kingdom (35.2%), the Netherlands (34.6%), New Zealand (33.0%), the United States (32.9%), Finland (30.0%), Canada as a whole (29.4%), Spain (27.9%) and Japan (27.7%). In most countries, however, the probability of obtaining a first degree equivalent to Québec's bachelor's degree was lower than in Québec. Québec awarded 59% of its bachelor's degrees to women, while the comparable percentages were 61% for Sweden, 59% for Canada as a whole, 57% for France and 56% for Italy. Conversely, Japan awarded only 35% of such degrees to women, while the comparable percentages were 40% for Turkey, 41% for Korea and Switzerland and 43% for Germany. Graph 5.9 gives the percentages of bachelor's degrees awarded to women in Québec and some OECD countries in 1998.

For master's degrees, the rate observed in Québec was 6.4%, ranking it fifth after the United States (14.6%), New Zealand (14.1%), the United Kingdom (12.3%) and Ireland (11.9%). Québec, however, awarded more master's degrees than France, the Flemish community in Belgium, Canada as a whole, Norway and Italy. Québec awarded 52%

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1 For further information on this comparison with the OECD countries, refer to the following *Education Statistics Bulletin*, published by the Direction des statistiques et des études quantitatives of the Ministère de l'Éducation du Québec: Foucault, Diane. *Graduation Rates in Québec and the OECD Countries*, No. 21, January 2000. This document is available on the Internet at <http://www.meq.gouv.qc.ca>.

of its master's degrees to women, while the comparable percentages were 94% for Sweden, 65% for Italy, 63% for the Netherlands and 57% for Finland. Japan, however, awarded only 22% of its master's degrees to women, Korea, 30%, and Turkey, 37%.

The probability of obtaining a doctorate remained stable in Québec at 1.0%, a rate equivalent to the OECD average. Switzerland (2.5%), Finland (2.3%), Sweden (2.2%) and Germany (1.8%) posted the highest university graduation rates from postgraduate research programs. Québec awarded 37% of its doctorates to women, while the comparable percentages were 39% for France, 41% for the United States, 40% for Finland and 36% for Canada as a whole. The highest percentages of doctorates awarded to women were observed in Portugal (49%), Italy (45%), Spain (42%) and Mexico (42%). The lowest percentages were observed in Japan (17%) and Korea (20%).

Table 5.9

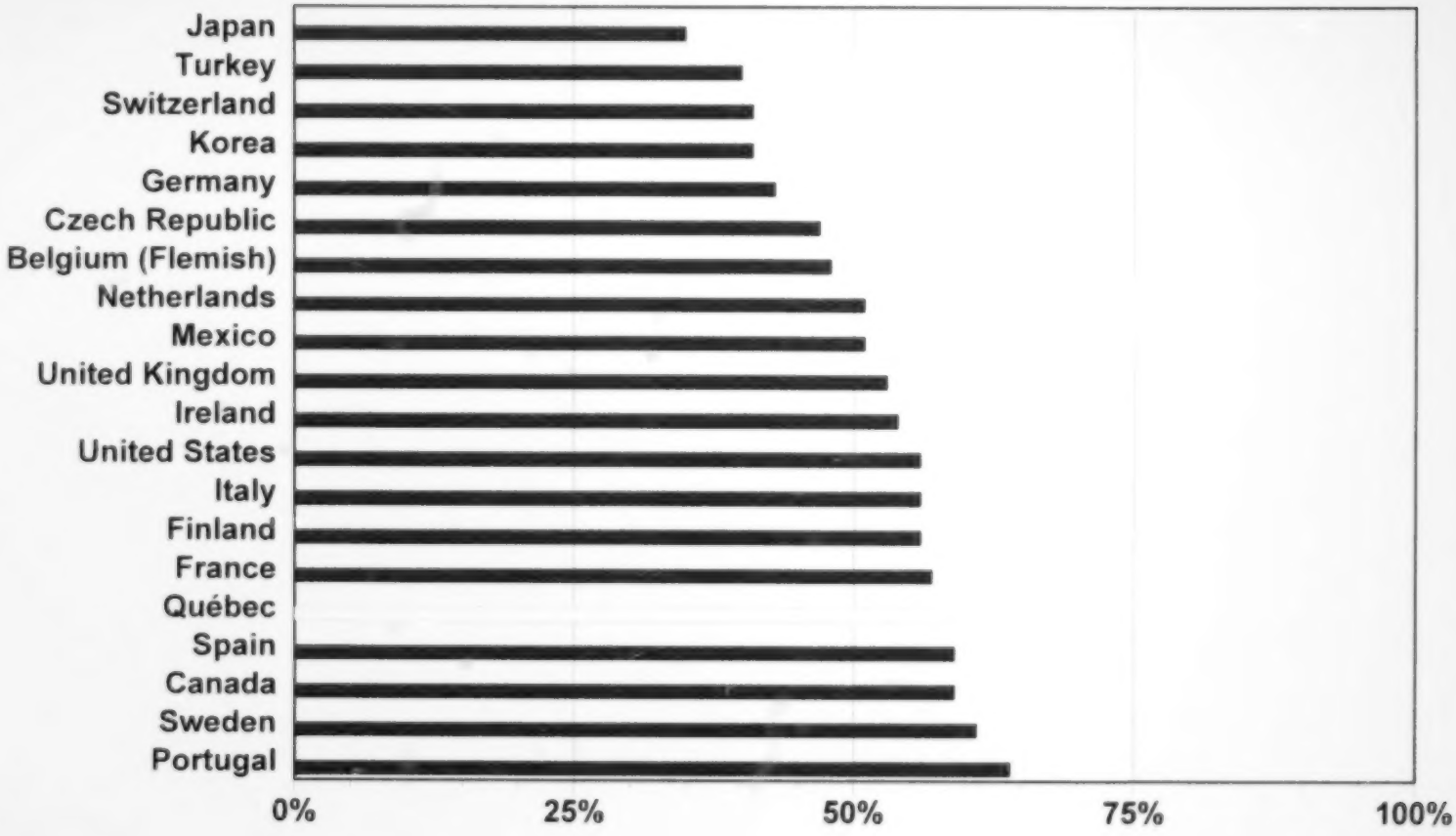
Probability of obtaining a university degree in Québec and OECD countries, 1998 (%)

	Bachelor's degree	Master's degree	Doctorate
Norway	38.3	5.2	1.1
United Kingdom	35.2	12.3	1.2
Netherlands	34.6	2.2	N/A
New Zealand	33.0	14.1	0.7
United States	32.9	14.6	1.3
Finland	30.0	0.7	2.3
Canada (including Québec)	**29.4**	**4.5**	**0.8**
Spain	27.9	N/A	0.9
Japan	27.7	2.5	0.5
Québec	**26.6**	**6.4**	**1.0**
Korea	25.5	2.5	0.6
Ireland	25.2	11.9	0.8
Sweden	25.1	0.4	2.2
France	24.0	6.3	1.2
Portugal	17.5	N/A	1.4
Belgium (Flemish)	17.4	4.9	0.7
Germany	16.0	N/A	1.8
Italy	14.5	3.1	0.4
Czech Republic	11.2	1.7	0.5
Average	**23.2**	**4.4**	**1.0**

N/A: Data not available

Graph 5.9

Percentage of university degrees awarded to women: Québec and OECD countries, 1998



6.1 Employment Trends by Level of Education

The increase of 45 000 jobs in 2000 over 1999 has benefited individuals who have a secondary school diploma and individuals who have completed some postsecondary studies.

Since the early 1990s, the structure of the labour market in Québec and in Canada as a whole has been changing in a way that benefits workers with more education. Indeed, the employment situation has been more favourable for those with a postsecondary diploma or university degree,[1] both during the recession of the early 1990s and in the period since 1993, when employment has been on the rise. The data presented in this section is from Statistics Canada. The levels of education considered here correspond to the highest level of education attained by employed workers in a given year.[2] It should be noted, however, that these levels do not necessarily correspond to employment requirements.

In Québec, it was only in 1995 that the job losses suffered in the last recession were absorbed. In 2000,[3] although there were 298 000 more jobs than in 1990, this growth in employment did not benefit all workers. Those with only a secondary school diploma or who did not finish secondary school suffered job losses, while those who successfully completed at least some postsecondary studies or graduated from CEGEP or university made gains. Thus, employed individuals with a university education were more numerous (by 245 000) in 2000 than in 1990, for an increase of 59.0%. Those with a postsecondary diploma held 343 000 more jobs (37.7%) in 2000 than in 1990. Those with only some postsecondary studies were more likely to hold jobs in 2000 than in 1990 (24 000 more), for an increase of 9.3%. In short, those with a postsecondary or university education held 612 000 more jobs in 2000 than in 1990.

The situation was different for those with only a secondary education, whether or not they obtained a diploma. In all, these individuals held 314 000 fewer jobs in 2000 than in 1990. Fewer people who left school after obtaining a secondary school diploma held jobs in 2000 than in 1990 (28 000 fewer), representing a decrease of 4.4%. The

1. According to Statistics Canada terminology, elementary school includes the first two years of secondary education. Postsecondary studies include all programs leading to diplomas and certificates in the trades (including the Diploma of Vocational Studies) and exclude university studies. The university sector begins with programs leading to at least a bachelor's degree.
2. The level of education attained by a person may increase over time. It is therefore possible that the same job, held by the same person, will be considered to be held by a person with a higher level of education in a given year than in an earlier year.
3. The figures for 2000 are an average of the first 11 months of that year.

number of individuals who were employed and whose highest level of education fell short of a secondary school diploma declined in 2000 by 287 000 compared with 1990, for a decrease of 31.0%.

Table 6.1

Employment trends in Québec, by level of education[1] (in thousands)

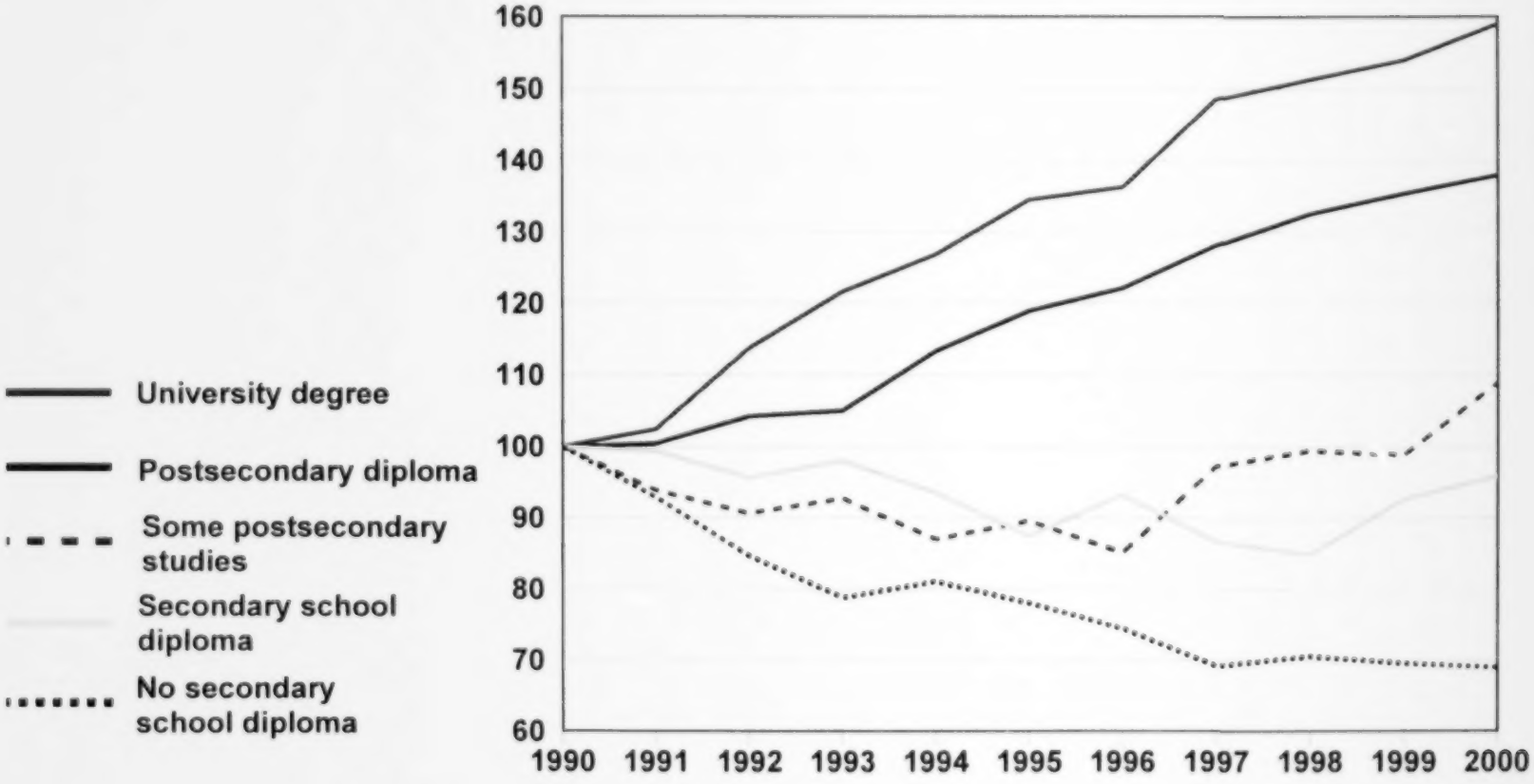
Year	No secondary school diploma	Secondary school diploma	Some postsecondary studies	Postsecondary diploma	University degree	Total
1990	927	632	257	910	416	3 141
1992	784	604	233	948	473	3 042
1995	723	553	230	1 082	560	3 148
1999	645	586	254	1 233	641	3 358
2000	640	604	281	1 253	661	3 439
Change from 1990 to 2000	- 31.0%	- 4.4%	- 9.3%	37.7%	59.0%	9.5%

Source: Statistics Canada

1. See notes 1, 2 and 3 at the bottom of the text.

Graph 6.1

Employment trends in Québec, by level of education (1990 = 100)



6.2 Labour Force Attachment by Level of Education[1]

In 2000,[2] approximately one out of every five jobs in Québec (18.6%) was held by a person who had not finished secondary school. Approximately one out of every four jobs (25.8%) was held by a person having finished secondary school or begun postsecondary studies. More than half of all jobs (55.6%) were held by people with a postsecondary or university diploma or degree.

In 2000, more than half of all jobs in Québec were held by people with a postsecondary or university diploma or degree.

Of the 19.2% who had a university degree, 13.2% had a bachelor's degree and 6.0% had a higher degree.

The proportion of jobs in Québec held by individuals who did not finish secondary school was 2.3 percentage points higher than in Ontario and 2.0 percentage points higher than in all the other provinces taken together; the proportion of jobs held by individuals with a secondary school diploma or who had begun postsecondary studies was lower by 6.0 and 7.4 percentage points, respectively; and the proportion of jobs held by individuals with a postsecondary diploma or university degree was higher by 3.7 and 5.4 percentage points, respectively.

The proportion of jobs in Québec held by people with a postsecondary diploma was 6.5 percentage points higher than in Ontario and 3.7 percentage points higher than in the other provinces, while the proportion of jobs held by people with university degrees was 2.8 percentage points lower than in Ontario, but 1.7 percentage points higher than in the other provinces.

Of the university graduates, the proportion of those with bachelor's degrees was 1.1 percentage points lower than in Ontario, but 1.2 percentage points higher than in the other provinces, while the proportion of people with higher degrees was 1.7 percentage points lower than in Ontario, but 0.5 percentage points higher than in the other provinces.

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1. According to Statistics Canada terminology, postsecondary studies include all programs leading to diplomas and certificates in the trades (including the Diploma of Vocational Studies) and exclude university studies. The university sector begins with programs leading to at least a bachelor's degree.
2. The figures for 2000 are an average of the first 11 months of that year.

The gaps between the proportion of jobs held by graduates of various levels in Québec with respect to Ontario and the other provinces in 2000 are smaller than those that existed ten years earlier, in 1990. The gap between the proportion of jobs held by individuals without a secondary school diploma in Québec decreased with respect to Ontario (0.6 percentage points) and with respect to the other provinces (2.4 percentage points). The gap between the proportion of jobs held by secondary school graduates decreased with respect to Ontario and the other provinces (1.8 and 0.9 percentage points, respectively). Finally, the gaps between the proportion of postsecondary and university graduates increased by 5.8 percentage points with respect to Ontario and 7.3 percentage points with respect to the other provinces.

Table 6.2

Employment by highest level of education, Québec, Ontario and the other provinces: 1990 and 2000[1] (%)

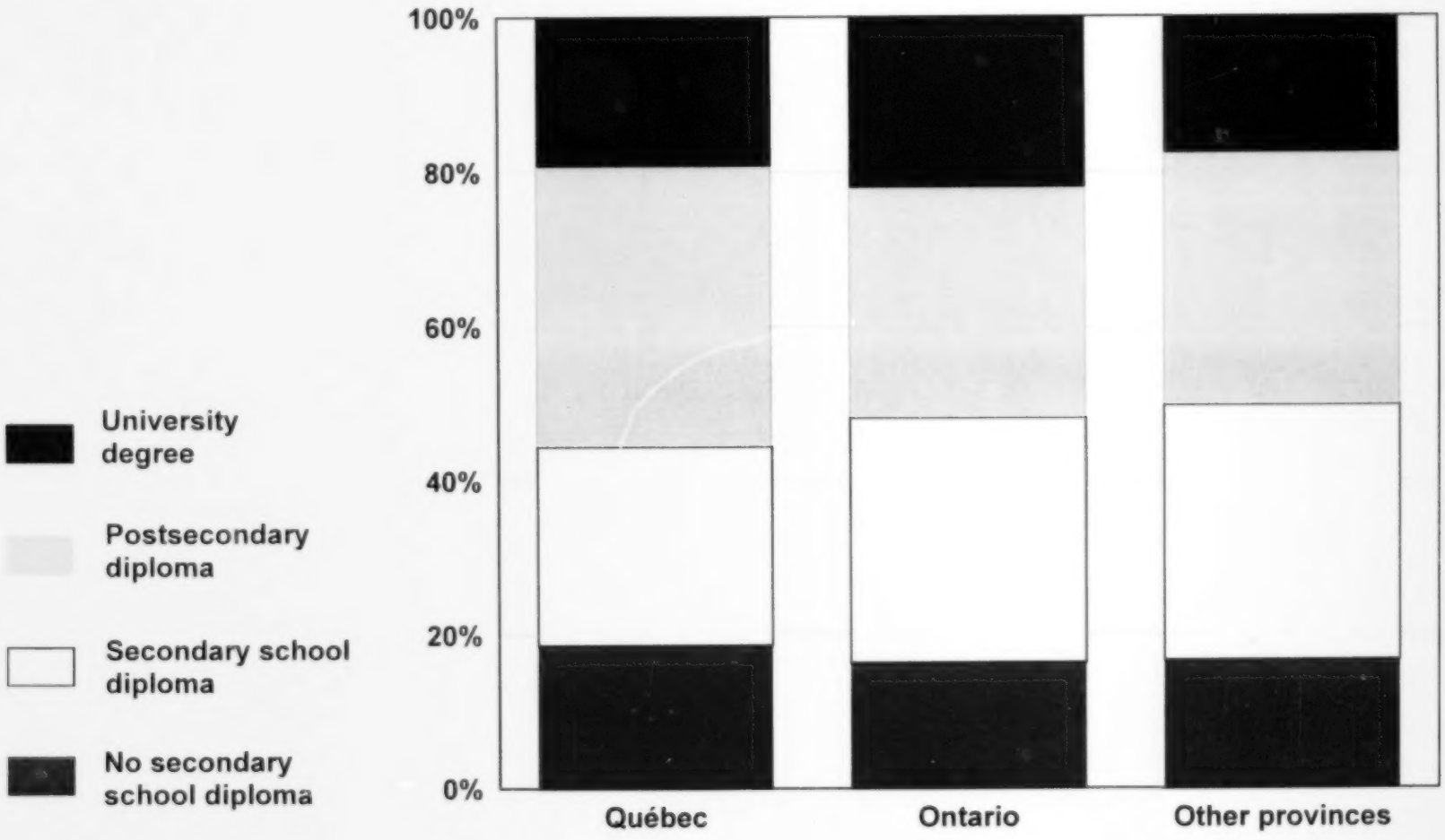
	Québec		Ontario		Other provinces	
	1990	2000	1990	2000	1990	2000
Total	100.0	100.0	100.0	100.0	100.0	100.0
No secondary school diploma	29.5	18.6	26.7	16.3	25.1	16.6
Secondary school diploma	20.1	17.6	23.0	21.8	24.3	22.6
Some postsecondary studies	8.2	8.2	10.2	10.0	10.3	10.6
Postsecondary diploma	29.0	36.4	24.0	29.9	27.0	32.7
University degree	13.2	19.2	16.1	22.0	13.3	17.5
Bachelor's degree	9.1	13.2	10.7	14.3	9.3	12.0
Higher degree	4.1	6.0	5.4	7.7	4.0	5.5

Source: Statistics Canada

1. See notes 1 and 2 at the bottom of the text.

Graph 6.2

Distribution of school leavers, by highest diploma earned: 2000 (%)



6.3 Integration of Graduates Into the Labour Market

From one year to the next, a large portion of the approximately 200 000 secondary school, college and university graduates enter the labour market. The data obtained through Québec government studies provides a picture of the placement of some 120 000 secondary school vocational education, college technical and pre-university education and university graduates a few months after they obtain their diploma or degree.[1]

Graduates of vocational and technical education programs had much lower unemployment rates in 2000 than those observed in 1994. Employers were more likely to hire graduates entering the labour market than in previous years.

Since 1994, more than 80.8% of students with a Diploma of Vocational Studies (DVS) (known as the Secondary School Vocational Diploma–SSVD prior to 1998) have found work. In 2000, 84.6% of students who graduated with a DVS were in the labour force (either working or looking for work), down from 1998. The unemployment rate of people with a DVS has been in decline since 1994, and was 13.0% in 2000, down more than half from 27.2% in 1994.

The situation of students with an Attestation of Vocational Specialization (AVS) was similar to that of graduates with a DVS between 1994 and 2000. Fewer students who graduated with an AVS were in the labour force in 2000 than in 1994, when the figure stood at 89.9%. After having declined from 1994 to 1999, the unemployment rate among this section of the population remained unchanged in 2000, at 12.4%.

In 2000, 78.4% of students who graduated from a college technical program were in the labour force, very similar to the figures observed since 1994. The unemployment rate for these individuals has been in decline since 1994, going from 18.4% in that year to 5.5% in 2000.

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1. Results refer to students graduating in the year indicated, nine months after the completion of studies for graduates with a DVS or an AVS and roughly 10 months for graduates with a Diploma of College Studies (DCS) (15 months for those finishing in the fall). The situation for those graduating with a bachelor's or a master's degree is as of January, approximately two years after they obtained their degree.

Since 1994, 13.4% to 18.1% of students who graduated from a college pre-university program have been in the labour force. In 2000, 79.3% of them went on to university without interrupting their studies. The unemployment rate for graduates from a pre-university program has been falling since 1994 (from 21.4% to 4.5% in 2000).

Since 1994, more than 80.0% of students with a bachelor's degree have entered the labour force. In 1999, 80.8% of them did so, compared with 81.4% in 1997. The unemployment rate fell by almost half in the 1990s, from 11.4% in 1994 to 6.4% in 1999.

In 1999, 86.1% of students with a master's degree entered the labour force, a significant increase over the rate of 82.8% observed in 1997. The unemployment rate, which had risen between 1994 and 1997, was 7.4% in 1999. Despite the decrease in the unemployment rate in 1999, graduates of master's programs are now posting a higher unemployment rate than graduates of bachelor's programs and college technical programs, for the first time since 1982.

Overall, a comparison of the unemployment rates of secondary school vocational education, college technical and pre-university education and university graduates with those observed for the labour force as a whole in Québec during the 1990s indicates that the situation of recent graduates has improved (see Table 6.3 and Graph 6.3).

Table 6.3

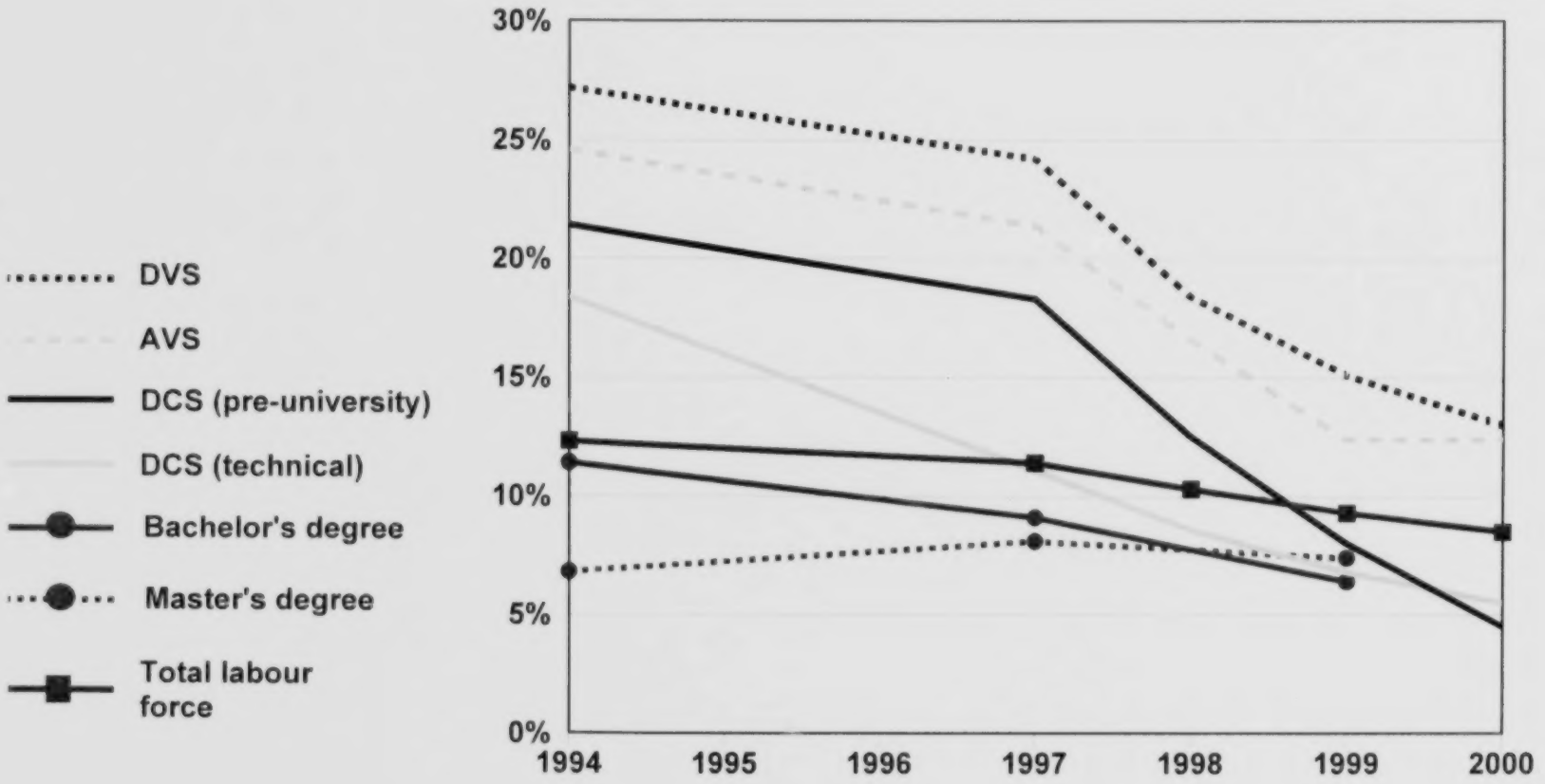
Unemployment rates for graduates, by level of education and type of diploma or degree (%)

	1994	1997	1998	1999	2000
Secondary education					
DVS (or SSVD)	27.2	24.2	18.4	15.1	13.0
AVS	24.6	21.4	16.6	12.4	12.4
College					
Pre-university education	21.4	18.3	12.5	8.0 [2]	4.5
Technical education	18.4	11.1	8.6	6.8	5.5
University					
Bachelor's degree	11.4	9.1	—	6.4	—
Master's degree	6.8	8.1	—	7.4	—
Unemployment rate in Québec [1]					
15-19-year-olds	20.6	27.4	23.7	21.3	18.5
20-24-year-olds	15.9	15.7	14.2	12.7	11.6
25-34-year-olds	12.7	11.2	9.7	8.7	8.1
Total labour force	12.3	11.4	10.3	9.3	8.5

N/A: Data not available
1. Data obtained from Statistics Canada. Includes the total labour force, regardless of level of education and work experience.
2. Revised data

Graph 6.3

Unemployment rate among graduates, by level of education and type of diploma or degree (%)



6.4 Integration of Secondary Vocational Education Graduates Into the Labour Market

In 2000, about nine months after graduation, 73.6% of graduates of programs leading to a Diploma of Vocational Studies (DVS) were employed, as were 76.1% of graduates of programs leading to an Attestation of Vocational Specialization (AVS), a slight drop with respect to 1999.

The unemployment rate among secondary vocational education graduates has decreased by more than half since 1996, falling from 27.0% in that year to 13.0 in 2000.

A total of 27.2% more students received a first DVS in 2000 than in 1999 (28 743 compared with 22 596, according to a government study). Proportionally speaking, however, the number of jobs held by DVS graduates grew by only 25.6%, from 16 835 in 1999 to 21 151 in 2000.

On March 31, 2000, 73.6% of graduates of programs leading to a DVS were employed, 11.0% were looking for a job, 11.1% were still in school and 4.3% were not in the labour force. The number of DVS graduates in the labour force (either working or looking for work) was 84.6%, a percentage that has been declining steadily since 1998. The unemployment rate of DVS graduates has decreased by more than half since 1996, falling from 27.0% in that year to 13.0% in 2000.

A total of 86.6% of DVS graduates were employed full-time in 2000. This percentage has been increasing steadily since 1996, when it stood at 79.0%. There is an obvious trend throughout: more men than women are employed full-time. Since 1996, the percentage of men employed full-time has varied between 90.0% and 94.3%, compared with 66.2% and 76.9% of women.

Between 1996 and 2000, the correspondence between the field of schooling and the field of employment increased from 66.8% to 76.0% among DVS graduates working full-time. This trend has been more favourable to men than women.

A total of 8.6% fewer students received a first AVS in 2000 than in 1999 (4 055 compared with 4 437, according to a government study). The number of jobs held by AVS graduates declined by 10.0%, from 3 430 in 1999 to 3 086 in 2000.

On March 31, 2000, 76.1% of 1998-1999 graduates of programs leading to an AVS were employed, 10.8% were looking for a job, 8.0% were still in school and 5.1% were not in the labour force. The number of AVS graduates in the labour force has been declining since 1998 because more of them have remained in school. After dropping from 1996 to 1999, the unemployment rate of AVS graduates remained steady in 2000 at 12.4%.

A total of 86.4% of AVS graduates were employed full-time in 2000, compared with 88.1% in 1999. While the situation of women improved in 2000, there is a large gap between the full-time employment rate of women (74.6%) and that of men (94.9%).

The correspondence between the field of schooling and the field of employment increased from 73.1% in 1999 to 76.2% in 2000. This trend has been more favourable to men than women since 1996. The situation of women improved considerably in 2000: the correspondence between the field of schooling and the field of employment increased from 60.3% in 1999 to 70.1% in 2000.

The proportion of graduates with a DVS or AVS under the age of 20 who were employed in 2000 was 72.2%, while 8.6% were looking for work, 16.3% were still in school and 2.9% were not in the labour force. Among this age group, the proportion of graduates with a DVS or AVS in the labour force was 80.8% in 2000, compared with 86.2% in 1999. The unemployment rate for this age group was still lower than that of DVS and AVS graduates taken as a whole (10.7% in 2000).

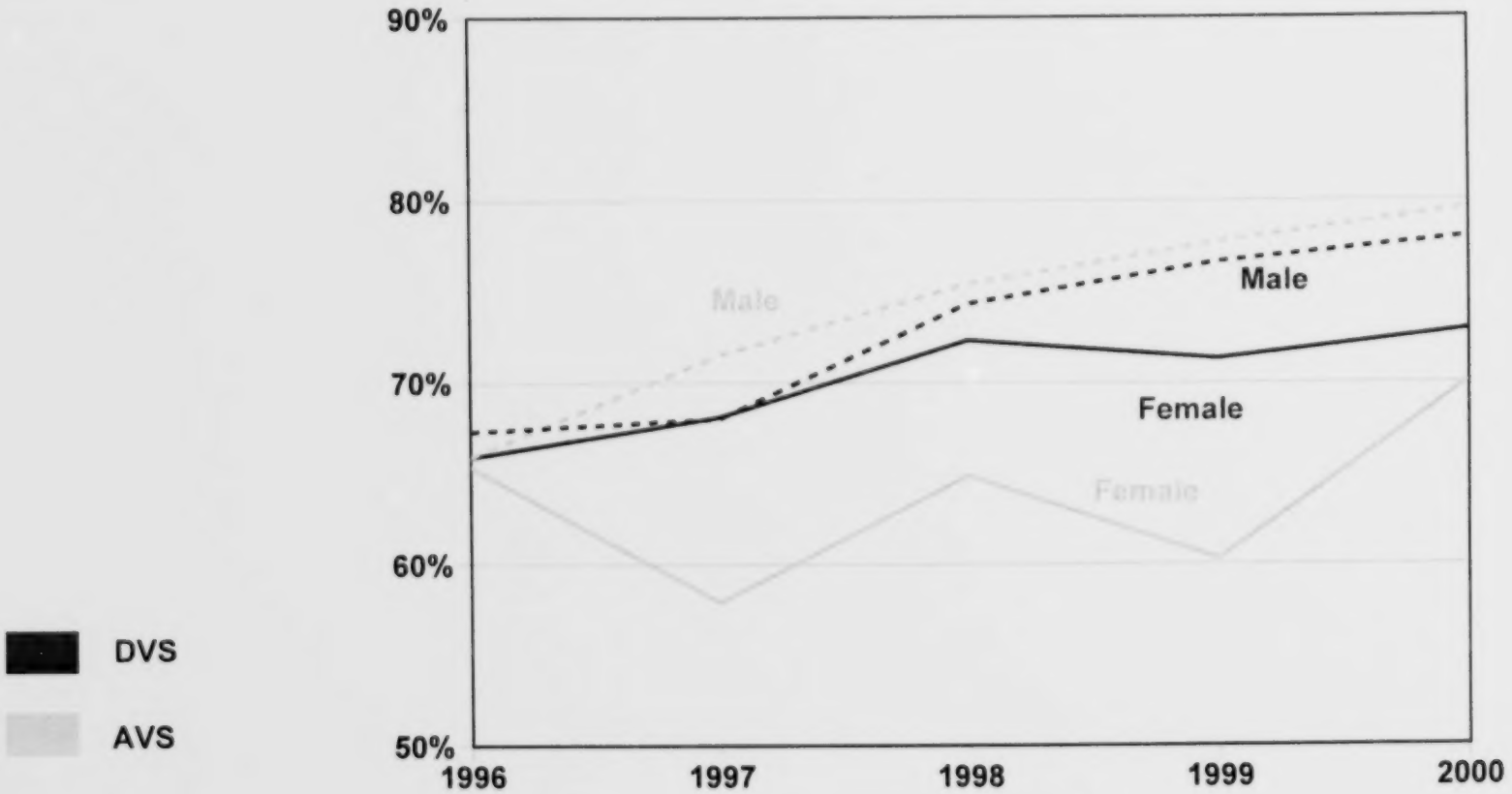
Table 6.4

Employment situation of secondary school vocational education graduates, by graduation class, on March 31 following completion of their studies (%)

	1996	1997	1998	1999	2000
Graduates with a DVS (formerly SSVD)					
Employed	59.0	65.6	73.2	74.5	73.6
Looking for a job	21.8	21.0	16.5	13.3	11.0
In school	12.0	8.1	6.0	8.3	11.1
Not in the labour force	7.2	5.3	4.3	3.9	4.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Unemployment rate	27.0	24.2	18.4	15.1	13.0
Graduates with an AVS					
Employed	65.7	69.5	74.3	77.3	76.1
Looking for a job	18.3	18.9	14.8	10.9	10.8
In school	8.6	6.3	5.8	6.8	8.0
Not in the labour force	7.4	5.3	5.1	5.0	5.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Unemployment rate	21.8	21.4	16.6	12.4	12.4
Graduates with a DVS or AVS under the age of 20					
Employed	61.8	69.9	75.8	76.1	72.2
Looking for a job	15.8	15.1	12.9	10.2	8.6
In school	17.6	11.6	8.3	11.3	16.3
Not in the labour force	4.7	3.3	3.0	2.5	2.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Unemployment rate	20.4	17.8	14.5	11.8	10.7

Graph 6.4

Proportion of jobs related to studies among graduates of programs leading to a DVS or an AVS working full-time on March 31 following completion of their studies, by gender (%)



6.5 Employers' Opinions of Graduates of Vocational Education Programs

In 2000, the Ministère de l'Éducation surveyed employers who had hired at least one secondary school vocational education graduate between 1996 and 1999.

In 2000, 89.6% of employers considered their vocational education recruits competent. In addition, 87.3% of them felt that a vocational education diploma was important or very important as a hiring criterion.

Employers' overall evaluation of the competence of graduates was average or good in 89.6% of cases in 2000, while the corresponding percentages were 91.2% in 1997, 89.6% in 1994-1995 and 83.4% in 1990.

After three months of work, 72.7% of employers claimed to be satisfied or very satisfied with the performance of graduates, compared with 73.6% in 1997 and 73.2% in 1994-1995. After one year, this percentage reached 91.2%, compared with 91.6% in the previous study.

The study demonstrated that 68.1% of employers prefer hiring vocational education graduates for trade work. In addition, 19.6% of employers often or regularly hire individuals with less schooling, while 10.3% hire people with more schooling.

More than 80% of the employers surveyed believed that vocational education provides graduates with distinct tools that give them an advantage over nongraduates and that prepare them to more effectively perform their tasks and more readily adapt to change: more theoretical knowledge, greater ease in specializing in their field and greater skills (dexterity). Also, 72.6% of the employers pointed out that graduates had better attitudes with respect to work.

Employers reported difficulty recruiting qualified personnel for the types of jobs associated with vocational education. Indeed, 58.8% of employers said that there were not enough qualified applicants.

Five of the 12 suggested hiring criteria were considered important or very important by more than 87.0% of employers. The fact that these 5 criteria include "relevant field of study" and "applicant has obtained the required diploma" clearly illustrates how much employers recognize the value of trade-related studies and their certification.

In order of importance, the 13 criteria (out of a possible 36) considered important by at least 73.0% of employers are: punctuality, a thorough knowledge of basic techniques, loyalty, honesty, respect for authority, a sense of responsibility, the ability to work well in a team, good listening skills, understanding of and compliance with instructions, the ability to keep up-to-date in their daily work, resourcefulness, productivity (accuracy, quality, speed), and the ability to adapt.

An analysis of the evaluation of the work of recruits with respect to employers' expectations indicates potentially problematic situations for three items in the competency profile. In more than 20.0% of cases, these items fell short of employers' expectations, which were average or high: productivity (27.1%), resourcefulness (23.2%) and a thorough knowledge of basic techniques (21.3 %).

Other items that need improvement are:

1. technical knowledge (specialized techniques, advanced techniques and math)
2. language skills (English and French)
3. a number of proactive abilities and attitudes

Table 6.5a

Evaluation of recruits' level of competence (% of employers)

	1990	1994-1995	1997	2000
Level of competence				
High	22.3	37.1	40.9	39.0
Average	61.1	52.5	50.3	50.6
Low	N/A	9.5	7.8	9.7
Not indicated	N/A	0.9	0.9	0.7

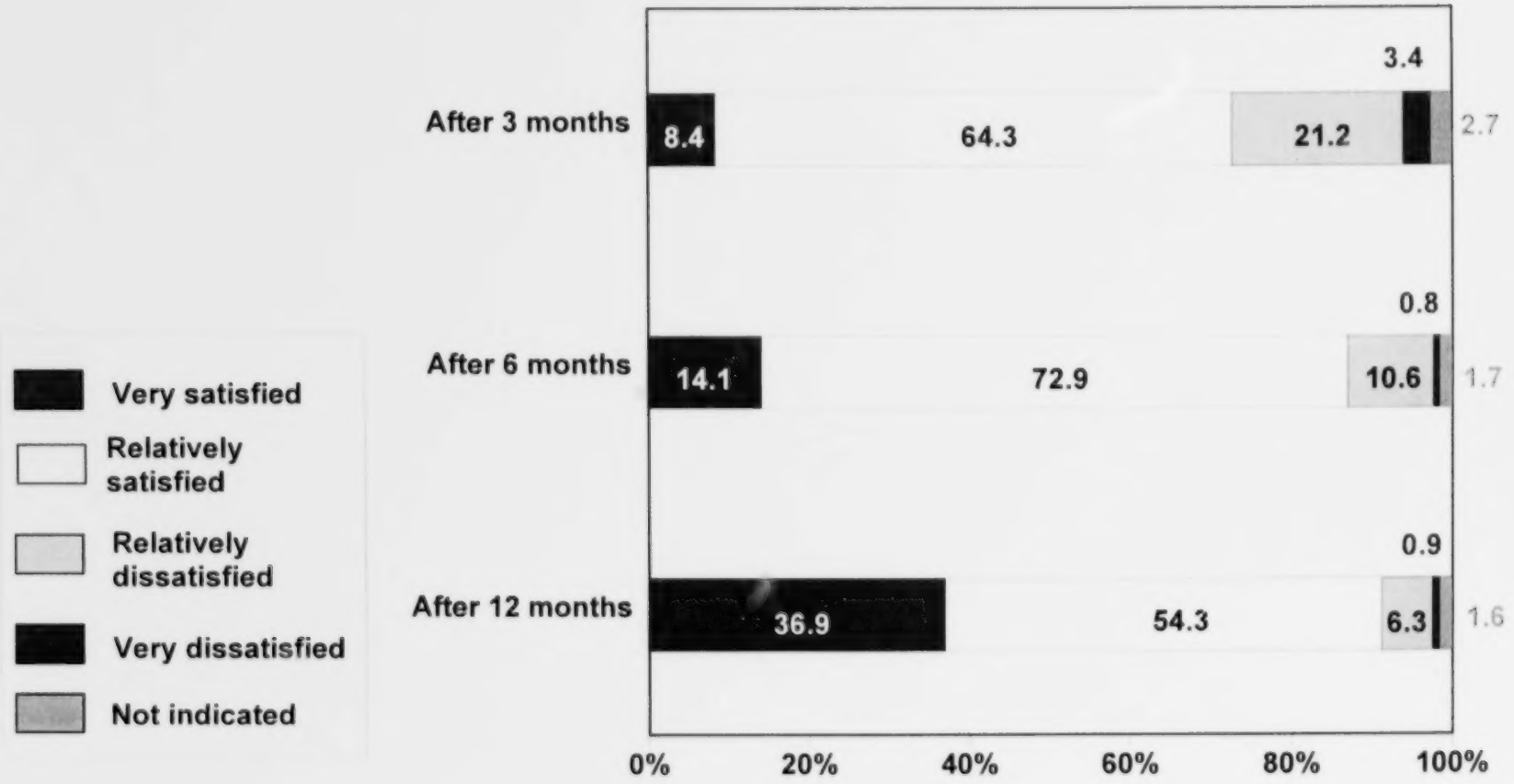
Table 6.5b

Employers' satisfaction with performance (% of employers)

	1990	1994-1995	1997	2000
Satisfied or very satisfied				
After 3 months	N/A	73.2	73.6	72.7
After 6 months	N/A	89.1	87.8	87.0
After 12 months	N/A	92.4	91.6	91.2

Graph 6.5

Employers' satisfaction with the performance of vocational education graduates over different periods of time (survey conducted in 2000)



6.6 Integration of College Graduates Into the Labour Market

The percentage of graduates of college technical programs who were employed about ten months after graduation continued to rise in 2000. It went from 68.1% in 1996 to 74.1% on March 31, 2000. In comparison, 15.8% of college pre-university graduates were employed in 2000.

The unemployment rate among graduates of college technical programs has fallen by more than half since 1996, from 13.3% to 5.5%.

According to a government study, the number of graduates has increased every year for the past five years. *Proportionally speaking*, the number of jobs held by college technical program graduates is growing more rapidly than the number of graduates themselves. Thus, between 1996 and 2000, the number of jobs obtained by college technical program graduates increased by 22.7%, from 9 300 to 11 408. During the same period, the number of college graduates increased by 12.8%, from 13 660 to 15 404.

In 2000, 74.1% of graduates were employed, while 4.3% were looking for work, 19.6% were still in school and 2.0% were not in the labour force. These percentages have remained constant since 1996. Between 78.3% and 78.5% of college technical program graduates are in the labour force (either working or looking for work). The unemployment rate of college technical graduates has fallen by more than half since 1996, from 13.3% to 5.5%. The unemployment rate of graduates aged 24 or younger is slightly lower than that of all age groups taken together (5.1% compared with 5.5%). About 80% of students who earned a Diploma of College Studies (DCS) in technical education in 1998-1999 were 24 or younger.

The percentage of students who, after obtaining a DCS in technical education the previous year, were still in school on March 31 of the year in question rose from 18.2% in 1996 to 19.6% in 2000. Most of these students (85.3%) were in university, 5.8% were in technical education and 2.7% were in pre-university education. Of those in university, 89.0% were studying in a field related to the diploma earned in 1998-1999. Of those in technical education, 81.7% were also studying in a field related to the diploma earned in 1998-1999. Finally, 7.2% of those still in school on March 31, 2000, were there because they were unable to find a job.

In 2000, 86.7% of graduates from a college technical program were employed full-time. This percentage has grown steadily since 1996, when it stood at 76.6%. And, although it has increased more rapidly among women than men, men were more likely to be employed full-time (94.1%) than women (82.2%) in 2000. Since 1998, the correspondence between the field of schooling and the field of employment has been obvious: in 2000, 84.1% of full-time jobs, that is, 84.6% among men and 83.7% among women, were related to the training received. In 2000, 41.8% of part-time workers were employed part-time because they could not find full-time jobs.

In 2000, 15.8% of graduates of college pre-university programs were employed about ten months after graduation, while 0.7% were looking for work, 82.8% were still in school and 0.7% were not in the labour force. Further education is the main goal of graduates of pre-university programs.

In 2000, 16.5% of college pre-university graduates were in the labour force. The unemployment rate among these graduates has been dropping since 1997, going from 18.3% in that year to 4.5% in 2000.

Of the 82.8% of graduates who were still in school in 2000, 98.0% were in university. Only 2.8% of graduates still in school on March 31, 2000, were there because they could not find a job.

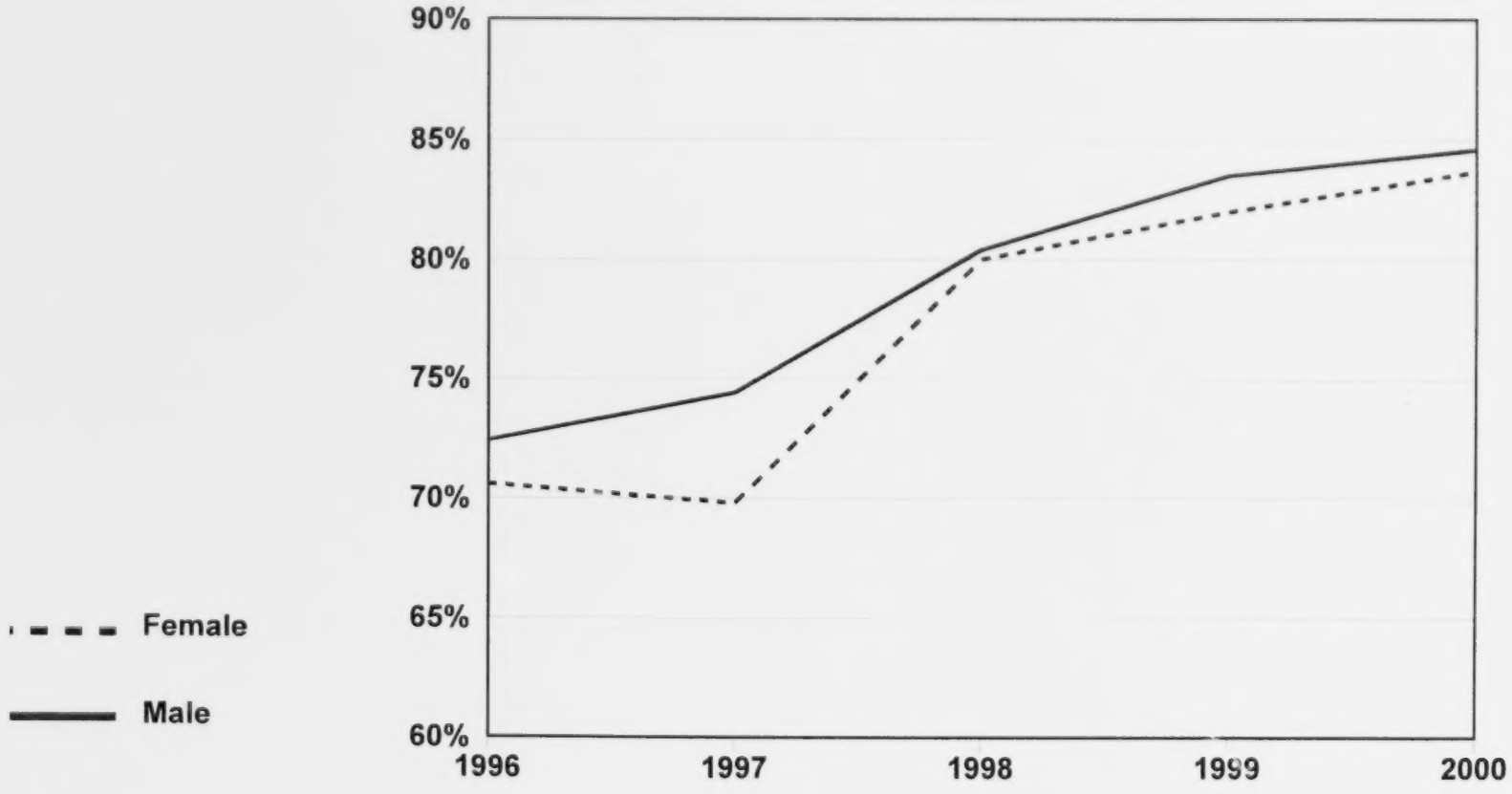
Table 6.6

Employment situation of college graduates, by graduation class, on March 31 of the year following completion of their studies (%)

	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999
Graduates of technical programs					
Employed	68.1	69.8	71.6	73.2	74.1
Looking for a job	10.4	8.7	6.7	5.3	4.3
In school	18.2	19.0	19.0	19.3	19.6
Not in the labour force	3.3	2.5	2.7	2.2	2.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Unemployment rate	13.3	11.1	8.6	6.8	5.5
Graduates of pre-university programs					
Employed	14.5	14.8	13.9	12.3	15.8
Looking for a job	2.4	3.3	2.0	1.1	0.7
In school	81.1	79.9	81.6	85.2	82.8
Not in the labour force	2.0	2.0	2.5	1.4	0.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Unemployment rate	14.1	18.3	12.5	8.1	4.5

Graph 6.6

Proportion of jobs related to studies among graduates of programs leading to a DCS in technical education working full-time on March 31 following completion of their studies, by gender (%)



Statistical Appendix

Table 1
Full-time and part-time enrollment, by level of education and sector, 1990-1991 to 1999-2000

Table 2
Full-time and part-time enrollment, by category of institution, language of instruction, level of education and sector, 1999-2000

Table 3
Enrollment in secondary vocational education and college technical education, 1992-1993 to 1999-2000

Table 4
Personnel in school boards, CEGEPs and universities by job category, based on full-time equivalents, 1988-1989 to 1998-1999

Table 5
Number of diplomas awarded, by level of education and type of diploma, 1990 to 1999

Table 6
Schooling rates, by age, gender, level of education and attendance status, 1998-1999 (%)

Table 1

Full-time and part-time enrollment, by level of education and sector, 1990-1991 to 1999-2000

	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
Preschool (4-year-olds)	**7 171**	**7 598**	**8 002**	**8 151**	**14 023**	**17 284**	**17 294**	**16 295**	**15 908**	**15 174**
Preschool (5-year olds)	**86 341**	**85 276**	**83 530**	**85 316**	**89 912**	**95 651**	**96 087**	**95 303**	**91 153**	**89 223**
Elementary Education (Youth Sector)	**583 893**	**576 601**	**566 448**	**555 417**	**547 395**	**547 642**	**552 482**	**559 279**	**566 372**	**573 102**
Secondary Education (Youth Sector)	**473 634**	**478 571**	**495 331**	**498 306**	**498 105**	**492 629**	**486 696**	**479 740**	**469 250**	**456 148**
Elementary and Secondary Education (Adult Sector[1])	**238 486**	**248 825**	**223 651**	**222 531**	**223 886**	**226 317**	**222 434**	**218 193**	**214 701**	**218 816**
College[2]	**235 435**	**242 333**	**251 391**	**254 874**	**247 436**	**241 833**	**237 455**	**231 040**	**228 718**	**219 144**
Regular education	154 697	161 744	172 061	179 036	180 976	178 847	180 098	176 350	174 264	171 416
Adult education	80 738	80 589	79 330	75 838	66 460	62 986	57 357	54 690	54 454	47 728
University[3]	**245 433**	**249 048**	**256 426**	**253 344**	**244 531**	**237 810**	**230 941**	**226 976**	**226 638**	**231 874**
Undergraduate studies	207 928	209 825	214 856	210 759	201 418	194 196	187 565	183 369	183 157	186 991
Graduate studies	30 275	31 469	33 334	33 782	34 021	34 271	34 086	34 281	34 558	36 120
Postgraduate studies	7 230	7 754	8 236	8 803	9 092	9 343	9 290	9 326	8 923	8 763
Total	**1 870 393**	**1 888 252**	**1 884 779**	**1 877 939**	**1 865 288**	**1 859 166**	**1 843 389**	**1 826 826**	**1 813 100**	**1 803 481**

Sources: Déclaration des clientèles scolaires (DCS), Déclaration des clientèles en formation professionnelle (DCFP), Système d'information du Ministère sur les clientèles adultes (SIMCA), Système d'information financière sur la clientèle adulte (SIFCA), Système d'information et de gestion des données sur l'effectif collégial (SIGDEC), Système de recensement des clientèles universitaires (RECU)

1. Only persons having taken courses for which credits are earned for certification purposes are included.
2. Fall term. Figures for adult education exclude students enrolled in noncredit programs.
3. Fall term. These figures include resident physicians and some students in college or Explorations programs. However, they exclude auditors, postdoctoral trainees, students in Explorations programs and students from the Collège militaire Royal de Saint-Jean.

Table 2

Full-time and part-time enrollment, by category of institution, language of instruction, level of education and sector, 1999-2000

	Preschool	Preschool	Elementary	Secondary	Elementary and Secondary	College[2]		University[3]	Total
	4-year-olds	5-year-olds	(Youth Sector)	(Youth Sector)	(Adult Sector[1])	Regular Education	Adult Education		
School Boards	**14 894**	**85 053**	**544 452**	**382 648**	**216 142**				**1 243 189**
French	13 796	75 599	487 574	343 752	195 613				1 116 334
English	820	8 874	55 398	38 895	20 274				124 261
Native languages	278	580	1 480	1	255				2 594
Private Institutions	**61**	**3 918**	**26 941**	**72 635**	**2 037**	**14 541**	**11 516**		**131 649**
French	28	3 151	21 577	65 425	1 764	8 164	4 008		104 117
English	33	767	5 364	7 210	273	2 831	152		16 630
French and English						3 546	7 356		10 902
Public Institutions Outside the Jurisdiction of the Ministère de l'Éducation	**219**	**252**	**1 709**	**865**	**637**	**2 027**	**66**		**5 775**
French	87	137	1 391	799	637	1 932	66		5 049
English	23	20	132	66		95			336
Native languages	109	95	186						390
CEGEPs and Campuses						**154 848**	**36 146**		**190 994**
French						131 896	31 809		163 705
English						22 952	4 337		27 289
French and English									
Universities and Branches								**231 874**	**231 874**
French								176 272	176 272
English								55 602	53 602
Total	**15 174**	**89 223**	**573 102**	**456 148**	**218 816**	**171 416**	**47 728**	**231 874**	**1 803 481**
French	13 911	78 887	510 542	409 976	198 014	141 992	35 883	176 272	1 565 477
English	876	9 661	60 894	46 171	20 547	25 878	4 489	55 602	224 118
Native languages	387	675	1 666	1	255				2 984
French and English						3 546	7 356		10 902

Sources: Déclaration des clientèles scolaires (DCS), Déclaration des clientèles en formation professionnelle (DCFP), Système d'information du Ministère sur les clientèles adultes (SIMCA), Système d'information financière sur la clientèle adulte (SIFCA), Système d'information et de gestion des données sur l'effectif collégial (SIGDEC), Système de recensement des clientèles universitaires (RECU)

1. Only persons having taken courses for which credits are earned for certification purposes are included.
2. Fall term. Figures for adult education exclude students enrolled in noncredit programs.
3. Fall term. These figures include resident physicians, but exclude auditors, postdoctoral trainees and students in Explorations programs.

Table 3

Enrollment in secondary vocational education and college technical education, 1992-1993 to 1999-2000

	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000p
SECONDARY EDUCATION[1]	**84 726**	**85 026**	**86 018**	**86 900**	**88 690**	**93 274**	**94 263**	**99 142**
Under 20 years of age[2]	18 840	18 840	19 655	22 376	25 751	26 923	26 476	25 957
20 years of age or over[3]	66 546	66 546	66 363	64 524	62 939	66 351	67 787	73 455
REGULAR PATHS: DVS (SSVD), SSVC, AVS, AVE	**58 413**	**58 023**	**59 771**	**66 950**	**72 990**	**75 786**	**77 127**	**75 642**
Under 20 years of age[2]	17 066	16 871	18 015	20 921	24 530	25 818	25 208	24 573
20 years of age or over[3]	41 347	41 152	41 756	46 029	48 460	49 968	51 919	51 069
OTHER PROGRAMS	**26 313**	**27 003**	**26 247**	**19 950**	**15 700**	**17 488**	**17 136**	**23 770**
Under 20 years of age[2]	2 207	1 609	1 640	1 455	1 221	1 105	1 268	1 384
20 years of age or over[3]	24 106	25 394	24 607	18 495	14 479	16 383	15 868	22 386
COLLEGE	**113 980**	**116 637**	**115 740**	**120 792**	**122 069**	**123 682**	**125 970**	**121 608**
Diploma of College Studies (DCS) *(DCS-technical)*	81 763	84 916	87 388	89 319	90 318	90 811	90 299	88 839
Certificat d'études collégiales (CEC)	11 412	10 576	8 517	7 338	1 209	280	60	14
Attestation d'études collégiales (AEC)	20 625	20 932	19 757	24 041	30 540	32 583	35 611	32 754
Diplôme de perfectionnement de l'enseignement collégial (DPEC)	180	213	78	94	2	8	-	1

Sources: Déclaration des clientèles en formation professionnelle (DCFP), Déclaration des clientèles scolaires (DCS), Système d'information financière sur la clientèle adulte (SIFCA), Système d'information du Ministère sur les clientèles adultes (SIMCA), Système d'information et de gestion des données sur l'effectif collégial (SIGDEC)

p: Preliminary figures

DVS: Diploma of Vocational Studies (or SSVD: Secondary School Vocational Diploma); SSVC: Secondary School Vocational Certificate; AVS: Attestation of Vocational Specialization; AVE: Attestation of Vocational Education

1. Only persons having taken courses for which credits are earned for certification purposes are included. Persons enrolled in more than one program in the same year are counted only once.
2. Includes students 20 years of age or over in the youth sector.
3. For the adult sector only.

Table 4

Personnel in school boards, CEGEPs and universities by job category, based on full-time equivalents,[1] 1988-1989 to 1998-1999

	1988-1989	1989-1990	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999
School Boards	**N/A**	**102 403**	**105 821**	**107 379**	**108 418**	**107 487**	**106 934**	**105 919**	**104 379**	**104 462**	**106 621**
Youth and Adult Sectors											
Teaching staff	N/A	68 730	70 867	71 958	72 079	71 170	70 518	70 331	69 680	70 366	71 147
Administrative staff	N/A	1 603	1 607	1 552	1 514	1 479	1 452	1 388	1 274	1 159	1 118
School principals	N/A	3 831	3 874	3 878	3 878	3 804	3 820	3 753	3 647	3 528	3 567
Managerial staff	N/A	796	822	842	874	859	848	802	750	671	663
Nonteaching professionals	N/A	4 320	4 486	4 563	4 767	4 803	4 691	4 530	4 250	3 898	3 894
Support staff	N/A	23 123	24 165	24 586	25 306	25 372	25 605	25 115	24 778	24 840	26 232
CEGEPs	**18 550**	**18 434**	**19 296**	**19 799**	**20 820**	**21 304**	**21 771**	**21 245**	**20 472**	**19 570**	**19 692**
Regular Education and Adult Education											
Teaching staff	11 176	11 085	11 669	12 264	12 863	13 405	13 919	13 652	13 224	12 699	12 892
Administrative staff	637	648	662	646	657	667	670	664	612	583	595
Managerial staff	303	304	313	315	323	335	327	307	287	245	230
Nonteaching professionals	1 019	1 015	1 056	1 048	1 095	1 127	1 146	1 085	1 047	964	964
Support staff	5 415	5 382	5 596	5 526	5 882	5 770	5 709	5 537	5 302	5 079	5 011
Universities[2]	**29 947**	**30 656**	**31 905**	**32 679**	**33 535**	**33 404**	**33 054**	**32 224**	**31 615**	**N/A**	**N/A**
Teaching and research staff	9 654	9 969	10 336	10 838	11 111	11 260	11 038	10 826	10 553	N/A	N/A
Teaching and research assistants	3 108	3 301	3 720	3 959	4 046	4 083	4 304	4 299	4 652	N/A	N/A
Executive personnel	1 284	1 305	1 308	1 343	1 347	1 348	1 305	1 291	1 218	N/A	N/A
Managerial staff	569	597	601	734	615	603	647	491	498	N/A	N/A
Nonteaching professionals	3 039	3 148	3 266	3 231	3 607	3 557	3 496	3 487	3 352	N/A	N/A
Support staff	12 293	12 336	12 674	12 574	12 809	12 553	12 264	11 830	11 342	N/A	N/A

Sources: Personnel des commissions scolaires (PERCOS II), Système d'information sur le personnel des organismes collégiaux (SPOC-RFA), Système d'information financière des universités (SIFU)

N/A: Data not available

1. All personnel activities carried out during the school year are included in the calculation of full-time equivalents for each job category.
2. Funds with or without restrictions. Excludes courses given by lecturers, those given in addition to regular course loads by regular professors and those given by individuals receiving honoraria or on contract. Figures from 1996-1997 are preliminary.

Table 5

Number of diplomas awarded, by level of education and type of diploma, 1990 to 1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Secondary[1]	**80 904**	**88 473**	**101 503**	**110 431**	**103 211**	**104 522**	**111 762**	**109 200**	**107 050**	**107 459**
General education	64 902	69 928	78 893	79 418	81 176	81 792	86 451	80 290	77 315	76 913
Vocational education	16 002	18 545	22 610	31 013	22 035	22 730	25 311	28 910	29 735	30 546
College	**41 303**	**41 769**	**43 294**	**44 686**	**44 683**	**43 230**	**40 909**	**42 572**	**41 717**	**40 433**
DCS (pre-university education)	24 992	25 244	25 414	24 971	25 833	25 559	24 375	25 843	25 045	23 930
DCS (technical education)	13 632	13 196	13 516	14 760	14 991	15 624	16 111	16 651	16 654	16 493
DCS without mention	832	1 053	1 228	1 541	741	331	148	7	-	-
CEC and DPEC[2]	1 847	2 276	3 136	3 414	3 118	1 716	275	71	18	10
University[3]	**48 728**	**51 329**	**53 822**	**55 277**	**56 817**	**56 015**	**55 184**	**53 277**	**50 781**	**50 726**
Bachelor's degree	25 526	26 911	27 683	28 404	28 967	28 932	29 602	28 894	27 478	28 284
Master's degree	5 166	5 404	5 823	6 082	6 604	6 414	6 547	6 514	6 727	6 814
Doctorate	712	810	915	891	959	1 037	1 087	1 143	1 231	1 170
Certificates and diplomas	17 324	18 204	19 401	19 900	20 287	19 632	17 948	16 726	15 345	14 458

Sources: Système de sanction des études appliquée au ministère de l'Éducation (SESAME), Sanction des adultes en formation générale (SAGE), Système de la sanction des études au collégial (SSEC), Système de recensement des clientèles universitaires (RECU)

DCS: Diploma of College Studies; CEC: certificat d'études collégiales; DPEC: diplôme de perfectionnement de l'enseignement collégial

1. From 1989-1990 to 1998-1999. Following the vocational education reform, approximately 8 800 students with an SSVC (Secondary School Vocational Certificate) also received an SSVD (Secondary School Vocational Diploma) in 1993.
2. Since 1994, there have been no new enrollments in programs leading to these types of certification. The Attestations d'études collégiales (AEC-attestation of college studies) are not counted by the Ministère.
3. These figures exclude diplomas awarded by the Collège militaire Royal de Saint-Jean.

Table 6

Schooling rates,[1] by age, gender, level of education and attendance status, 1998-1999 (%)

	Preschool and Elementary Education	Secondary		College		University		Total		
		Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	All attendance statuses
4-year-olds										
Male	18	0	0	0	0	0	0	18	0	18
Female	19	0	0	0	0	0	0	19	0	19
Total	19	0	0	0	0	0	0	19	0	19
5-year-olds										
Male	97	0	0	0	0	0	0	97	0	97
Female	98	0	0	0	0	0	0	98	0	98
Total	97	0	0	0	0	0	0	97	0	97
15-year-olds										
Male	0	96	0	0	0	0	0	96	0	96
Female	0	96	0	0	0	0	0	96	0	96
Total	0	96	0	0	0	0	0	96	0	96
16-year-olds										
Male	1	91	2	1	0	0	0	93	2	95
Female	0	93	2	2	0	0	0	95	2	97
Total	1	92	2	2	0	0	0	94	2	96
17-year-olds										
Male	1	42	11	35	0	0	0	78	11	89
Female	0	31	9	50	0	0	0	82	9	92
Total	1	36	10	43	0	0	0	80	10	90
18-year-olds										
Male	1	24	11	38	1	2	0	65	11	76
Female	1	18	8	53	0	3	0	74	9	83
Total	1	21	10	45	0	2	0	69	10	80
19-year-olds										
Male	1	18	8	28	2	9	0	56	10	66
Female	1	13	6	36	2	17	1	66	8	74
Total	1	15	7	32	2	13	0	61	9	70

1 Schooling rates are calculated by dividing the school population of a given age on September 30, 1998, by the population of the same age on the same date. The rates for 4-year-olds and 5-year-olds differ from the results published in Section 2.3 (see notes in Section 2.3).

Table 6 (cont.)

Schooling rates, by age, gender, level of education and attendance status, 1998-1999 (%)

	Preschool and Elementary Education	Secondary		College		University		Total		
		Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	All attendance statuses
20-to-24-year-olds										
Male	1	8	5	9	2	14	3	31	9	40
Female	0	6	3	10	2	19	5	35	10	45
Total	0	7	4	9	2	17	4	33	9	43
25-to-29-year-olds										
Male	0	3	3	2	1	4	3	10	7	16
Female	0	3	2	2	1	4	5	9	8	17
Total	0	3	2	2	1	4	4	10	7	16
30-to-39-year-olds										
Male	0	2	2	1	1	1	2	4	4	8
Female	0	2	1	1	1	1	3	4	6	10
Total	0	2	2	1	1	1	2	4	5	9
40-to-49-year-olds										
Male	0	1	1	0	0	0	1	2	3	4
Female	0	1	1	0	1	0	2	2	4	6
Total	0	1	1	0	1	0	2	2	3	5
50-to-59-year-olds										
Male	0	0	1	0	0	0	0	1	1	2
Female	0	0	1	0	0	0	1	1	2	2
Total	0	0	1	0	0	0	1	1	1	2
60 years of age or over										
Male	0	0	0	0	0	0	0	0	0	0
Female	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1